









UNIVERSITY QUESTION PAPERS  
1932



**UNIVERSITY OF CALCUTTA**

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**UNIVERSITY QUESTION PAPERS**

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# UNIVERSITY QUESTION PAPERS



## Matriculation Examination, 1932

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*Candidates are required to give their answers in their own words  
as far as practicable.*

*The figures in the margin indicate full marks.*

Translate any two of the following into English. —

(a) মহারাণীর দয়ার সীমা ছিল না। একদা একটি অনাথা দরিদ্রা 20  
রমণীর মৃত্যুকাল উপস্থিত হয়; এই স্ত্রীলোকটির এমন কেহই ছিল না  
যে, মৃত্যুকালে তাকে ঈশ্বরের নাম শ্রবণ করায়। ইহা শুনিবামাত্র  
মহারানী স্বয়ং তাহার নিকট উপস্থিত হইলেন এবং তাকে ধর্মশাস্ত্রের  
কথা শুনাইতে লাগিলেন। আর এক সময়ে ভিক্টোরিয়া অর্থ-বানে  
আরোহণ করিয়া বেড়াইতে বাইতেছিলেন। বাইতে বাইতে দেখিলেন,  
একজন মুটিয়া আপন মোট নামাইয়া, পথের ধারে বসিয়া আছে;  
সে অত্যন্ত ক্লান্ত হইয়া ঘন ঘন নিশ্বাস ফেলিতেছে। এই দুঃখী  
লোকটাকে দেখিয়া মহারাণীর মনে বড়ই দয়া হইল। তিনি তৎক্ষণাৎ  
গাড়ী থামাইলেন এবং তাকে আপনার গাড়িতে তুলিয়া লইয়া  
নির্দিষ্ট স্থানে নামাইয়া দিলেন।

(b) বায়ু না পাইলে, মানুষ কিংবা অল্প কোনও জীবই বাঁচিতে পারিত না। খাদ্য ও পানীয় না পাইলে আমরা কয়েক দিন বাঁচিতে পারি, কিন্তু বায়ু না পাইলে আমরা কয়েক মিনিটও বাঁচিতে পারি না। বায়ু না থাকিলে, বৃক্ষ-লতাদিও জন্মিতে এবং বাড়িতে পারিত না। জলের ভিতর বায়ু আছে বলিয়াই মৎস্য প্রভৃতি জলজন্তু সকল বাঁচিয়া থাকে। বায়ু বেগে বহিলে প্রদীপ নিবিয়া যায়, ইহা দেখিয়া মনে হয় যে, বাতাস আগুনের শত্রু। কিন্তু বাস্তবিক তাহা নয়। বাতাস না থাকিলে আগুনও জলিত না। জলন্ত প্রদীপকে যদি এমন করিয়া ঢাকিয়া রাখ যে, ভিতরে একটুও বাতাস না যায়, তাহা হইলে উহা শীঘ্রই নিবিয়া যাইবে।

নিশ্বাস-প্রশ্বাস দ্বারা আমরা নিয়ত বাহিরের বিশুদ্ধ বায়ু শরীরের ভিতর টানিয়া লইতেছি, এবং ভিতরের দূষিত বায়ু বাহির করিয়া দিতেছি। এইরূপ করিতেছি বলিয়াই বাঁচিয়া আছি।

(c) আকবরের সময়ে পারস্তে এক গরীব মুসলমান ছিলেন। তখন ২০ ঐ সকল স্থানের গরীব মুসলমানেরা হঠাৎ বড় লোক হইবার জন্য ভারতবর্ষে আসিতেন। এই ভঙ্গলোকটিও তাহাই করিলেন। তিনি সম্রাট দিল্লী আসিবার পথে তাহার এক কন্যা হইল। কন্যাকে খাওয়াইয়া বাঁচান, তাঁহার এমন সঙ্গতি ছিল না। কি করেন, অগত্যা মেয়েটিকে পথের মাঝে ফেলিয়া চলিয়া গেলেন। সেই সময় এক ধনী সওদাগর ঐ পথ দিয়া দিল্লী আসিতেছিলেন; তিনি দেখিলেন একটি পরমা সুন্দরী মেয়ে রাস্তার ধারে পড়িয়া আছে! তিনি মেয়েটিকে কুড়াইয়া লইলেন। দুধ দিয়া বাঁচায় এমন একটি ধাইও শীঘ্র জুটিল। সেই ধাই আর কেহ নহে—ঐ মেয়ের মাতা নিজেই।

দিল্লী আসিয়া সওদাগরটি আকবরের অধীনে মেয়ের পিতার একটি চাকরী করিয়া দিলেন। মেয়ের নাম রাখা হইল মেহেরউন্নিসা। মেহেরউন্নিসা বড় হইয়া তাঁহার মাতার সহিত প্রায়ই আকবরের প্রাসাদে যাইতেন। এক দিন সেলিম মেহেরউন্নিসাকে দেখিয়া মুগ্ধ হইলেন এবং তাঁহাকে বিবাহ করিবার চেষ্টা করিতে লাগিলেন।

## TRANSLATION FROM ASSAMESE INTO ENGLISH

Paper-Setters— { SRIJUT SURYAKUMAR BHUIYAN, M.A.  
 ,, AMBIKANATH BORAH, M.A.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks

Translate two of the following passages into English :—

20 × 2  
 = 40

(a) মোগল সম্রাট আকবৰ যেতিয়া দিল্লীৰ ৰাজপাটত আছিল, সেই সময়ত এলাহাবাদৰ পৰা প্ৰায় ১০০ মাইল দক্ষিণত গড়মণ্ডল নামেৰে এখন প্ৰাচীন হিন্দুৰাজ্য আছিল। আজিকালিও গড়মণ্ডলৰ ভগ্নাৱশেষ চাবলৈ বহুত মানুহ তালৈ যায়। আজিকালিও তাত প্ৰাচীন মন্দিৰ এটি-দুটি আছে। গড়মণ্ডল ৰাজ্যখন বৰ বেচি ডাঙ্গৰ নহয়। সেই গড়মণ্ডল ৰাজ্যৰ ভিতৰত কিছুমান সৰু সৰু ধুনীয়া চহৰ আৰু গাওঁ আছিল। এতিয়া সেই ঠাইৰ নাম হৈছে জব্বলপুৰ। তাৰ ওচৰতে নৰ্মদা নৈ। নৰ্মদাৰ দক্ষিণ ফালে এটি সুন্দৰ পৰ্বত দেখিবলৈ পোৱা যায়। গড়মণ্ডলৰ ৰাজধানীৰ চাৰিওফালে পৰ্বত আছিল। দেশখন আকাৰত সৰু হলেও এইখন বীৰপুৰুষৰ জন্মস্থান বুলি প্ৰখ্যাত আছিল। এই দেশৰ ৰজা-বিলাক বৰ ক্ষমতাশালী বুলি প্ৰবাদ আছিল। তেওঁবিলাক বিনয়ী আছিল, আৰু সকলোতকৈ দেশৰ স্বাধীনতাকে ডাঙ্গৰ বুলি ভাবিছিল।

(b) ১৫৬৪ খৃষ্টাব্দৰ এপ্ৰিল মাহত ইংলণ্ডৰ ষ্টেটফোৰ্ড-অন-এভন্-নগৰত উইলিয়ম ছেক্সপিয়াৰৰ জন্ম হয়। এওঁ পিতাকৰ তৃতীয় সন্তান। বাপেকৰ নাম জন আছিল। উইলিয়মে গাৱঁৰ স্কুলত পঢ়িয়েই বাপেকৰ আৰ্থিক অৱস্থা ভাল নোহোৱাত পঢ়া শেষ কৰিবলৈ বাধ্য হয়। ইয়াত তেওঁ অলপ মাতৃভাষা ইংৰাজী, আৰু লেটিন শিকে। তেতিয়া তেওঁৰ বয়স চৈধ্য বছৰ। ইয়াৰ চাৰি-পাচ বছৰৰ পাচত তেওঁ ওচৰৰ গাৱঁৰ এজনী ছোৱালী বিয়া কৰায়। এওঁ গিৰিয়েকতকৈ বয়সে আঠ বছৰৰ ডাঙ্গৰ আছিল। ইয়াৰ কিছুদিনৰ পাচত এজন ভদ্ৰলোকে তেওঁৰ বাবীত সোমাই পহু এটা চুৰ কৰিছিল বুলি উইলিয়মৰ বিপক্ষে গোচৰ কৰে। ছেক্সপিয়াৰে ভয় কৰি নিজৰ জন্মস্থান এৰি লণ্ডনলৈ যায়। অৰ্থৰ অভাৱত তেওঁ লণ্ডন মহানগৰত বহুতো দুখ ভোগ কৰিছিল। শুনা যায় যে তেওঁ পোনপ্ৰথমে থিয়েটাৰ চাবলৈ অহা মানুহৰ ঘোঁৰাবাখীয়া হৈ দুই-চাৰি পইচা উপাৰ্জন কৰিছিল। তাৰ পাচত থিয়েটাৰ কৰ্মোতা-সকলৰ লগুৱা হৈ তেওঁলোকক সহায় কৰিছিল বুলিও প্ৰবাদ আছে।

(c) বহুদৈৰ ঘৰ উজনিৰ মাজুলীৰ কমলাবাৰী গাৱঁত আছিল। সেই সময়ত, অৰ্থাৎ মানব দিনৰ আগেয়ে, গাওঁখনিত এশ কি ছ-কুৰি

## MATRICULATION EXAMINATION

ঘৰ মানুহ আছিল। বহুদৈৰ বাপেকৰ নাম বড়িকান্ত আৰু মাকৰ নাম কমলা। তেওঁবিলাকৰ জাত আছিল কলিতা, আৰু তেওঁলোক মজলীয়া অৱস্থাৰ মানুহ আছিল। বহুদৈ মাক-বাপেকৰ একেজনী জীয়াৰী আছিল। তাইৰ তলত মাথোন এটা ভায়েক আছিল। সম্পত্তিৰ ভিতৰত তেওঁবিলাকৰ কেইজনীমান গৰু আৰু এটা মহ আছিল। গাই কেইজনীৰ গাখীৰ খাইছিল আৰু মহটোৰে বড়িকান্তই খেতিবাতি কৰি সুখেৰে খাইছিল। মাটি বৰ সাকুৱা, সেইদেখি শস্ত্ৰ বৰ ভাল হৈছিল। সেইকালত আজিকালিৰ দৰে মানুহৰ লাহবিলাহ নাছিল। গতিকে খোৱাপিন্ধাত কাৰো দুখকষ্ট নাছিল। বহুদৈয়ে দিনৰ সময়ত মহটো চৰায়, আৰু পুৱা-গধূলি মাকৰ এচৰত তাঁত ববলৈ আৰু ভাত ৰান্ধিবলৈ শিকিছিল।

### TRANSLATION FROM HINDI INTO ENGLISH

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*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate any two of the following passages into English :—

(a) सालहवीं शताब्दी में “थोड़ा” नाम की एक राजधानी थी। 20  
वहीं “शिवरत्न” नाम का एक राजा था। उसके राज्य पर दिल्ली के मुसलमान बादशाह के दाँत गड़े थे, वह अपनी इकलौती बेटी “ताराबाई” को लेकर भाग खड़ा हुआ, और चित्तौड़ के समीप “बदनूर” नामक स्थान में आश्रय लिया। वहीं “तारा” को उसने युद्ध विद्या सिखलाई। घोड़े पर चढ़ना, धनुषबाण चलाना, तलवार और कटार से शत्रु का सामना करना—“तारा” के लिये सहज हो गया। उसके पिता ने घोषणा कर दी थी कि मैं अपनी बेटी की शादी उसी के साथ करूँगा, जो मेरा क़िला फिर से फ़तह कर लेगा। मेवाड़ के राजा के पुत्र “पृथ्वीराज” ने यह भार अपने ऊपर लिया। तारा उसपर मुग्ध हो गई। वह तारा के साथ दो सौ सिपाहियों को लेकर “थोड़ा” की ओर चल पड़ा। क़िला जीत लिया गया। एक शुभ मुहूर्त में खुशी खुशी तारा और पृथ्वीराज की शादी हो गई।

(b) मनुष्य जब बहुत प्रसन्न होता है, तब नाचने और गाने लगता है। जब हम किसी की अधिक प्रसन्नता सूचित करना चाहते हैं, तब हम कहते हैं कि वह मारे खुशी के नाच उठा। दूसरों के आदर-सत्कार और प्रसन्नता के लिये भी उसके सामने नाचने और गाने की प्रथा बहुत पुरानी है। हमारे यहां पार्वती के सामने शिव का और ब्रज की गोपियों के साथ कृष्ण का नृत्य बहुत प्रसिद्ध है। प्राचीन काल में जब योद्धा लोग विजय प्राप्त करके लौटते थे, तब वे स्वयं भी नाचते गाते थे और उनका सत्कार करने के लिये नगरनिवासी भी उनके सामने आकर नाचते गाते थे। कभी कभी ऐसा भी होता था कि युद्ध-क्षेत्र में वीर और योद्धा लोग जो कृत्य करके आते थे, उन कृत्यों का अभिनय भी नृत्य-गीत के उन उस्सवों के समय हुआ करता था।

(c) एक गांव के नज़दीक एक छोटी-सी नदी पूरी तरह उमड़कर बह रही थी। आसमान में बादल के सफ़ेद टुकड़े छितराये हुए थे। धूप और छाया कबड्डी खेल रही थी—कभी घाम और कभी सुहावनी बदली। दो पहर ढल चुकी थी। नदी की लहरें एक दूसरे से लड़ जगड़कर शोर मचाती थीं। प्रकृति के उस तीव्र और निरन्तर कोलाहल में भी सन्नाटे की उत्पत्ति हो रही थी। इसी समय एक नौ दस वर्ष की बालिका दो गायों को हांकती हुई नदी-तट पर पहुँची। उसके गौर मुख पर एक ऐसा स्वाभाविक उल्लास था, जो देखनेवालों को हटात् अपनी ओर आकृष्ट कर लेता था। बालिका जिस समय नदी-तट पर पहुँची, उस समय की घनी हरियाली और सामने के वेग से बहता हुआ पानी देखकर उसका दिल खश हो गया। वह तन्मय होकर गीत गाने लगी।

TRANSLATION FROM MAITHILI INTO ENGLISH

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*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate any two of the following into English :—

(a) मिथिला देशक प्राचीनताक संग संग मैथिली भाषा एवं मैथिली छिपिहुक प्राचीनता अछि। बौद्धक प्राचीन ग्रन्थ “ललित—विस्तर” मे—जे 20

ईस्वी सनक आरम्भक कालमे लिखल गेल छल—विदेह लिपिक वर्णन अछि। वेद पुराणादिमे मिथिलाक नाम विदेह पाओल जाइछ, तँ विदेह लिपि मैथिली लिपिहिक भिन्न नाम अछि। एहिसँ बुझना जाइछ जे मैथिली लिपि ईस्वी सनक आरम्भक पूर्वसँ वर्तमान अछि। ईस्वी सनक १४ म शताब्दीक पूर्वार्धमे ज्योतिरीश्वर कविशेखराचार्य “वर्णन-रत्नाकर” नामक गद्य ग्रन्थक रचना मिथिला भाषामे कयलन्हि जकर एक प्रति हस्तलिपि पुस्तक मैथिली लिपिमे कलकत्तास्थ एसियाटिक सोसाइटी, बङ्गालमे अद्य पर्यन्त सुरक्षित अछि। ईस्वी सनक १५ म शताब्दीक प्रथमार्धमे महा-महोपाध्याय मैथिल कवि कोकिल विद्यापति ठाकुर अपन अमूल्य पद रचना द्वारा एहि भाषाकें अमर बनाय देलन्हि। मैथिली लिपि तथा प्राचीन बङ्गला लिपिमे अधिकतर समानता पाओल जाइछ ओ वर्तमान बङ्गला लिपि तथा प्राचीन बङ्गला लिपिमे पार्थक्य दृष्टिगोचर होइछ। एहिसँ नीक जकां बुझना जाइछ जे प्राचीन बङ्गला लिपि मैथिली लिपिक अनुकरण मात्र छल।

(b) मिथिलाक एक ग्राममे राजेश्वरदा नामक एक धनाढ्य ब्राह्मण रहैत छलाह। ओ धर्मात्मा, चतुर, ओ कवि छलाह। संग संग धूर्ततामे तँ हुनक नाम समस्त देशमे विख्यात छलन्हि। ओ प्रत्येक दिन अपना पोखरिसँ माछ पिटवाय कय भोजन करैत छलाह। जाहि दिन माछ नहि होइत छलन्हि ताहि दिन भोजन नहि करैत छलाह। एक दिन सटहूझा नामक एक व्यक्ति हुनका दरवाजा पर अयलाह। हुनका देखितहिं राजेश्वरदा टाट भय स्वागत कयलथीन्ह ओ पुछलथीन्ह जे आओर गप्प पाछां करव पहिने कहू जे भोजन सिद्ध वा असिद्ध करव? सटहूझा बजलाह “हम तँ ई नियम कयने छी जे ब्राह्मणक भात खैवामे कोनो दोष नहि। सम्प्रति जे जातिक अभिमानी व्यक्ति लोकनि हलुआइक दोकानक सोहारी, नोनगर तरकारीक संगे खाइत छथि ताहिमे कोनो दोष नहि तँ अपनेक ओहिठाम भात खैवामे की दोष?”

(c) आई काहि बहुधा लोक सभ कहैत अछि जे पाश्चात्यदेशक स्त्रीगण सुखी छथि, हुनका लोकनिकें सभ प्रकारक स्वतन्त्रता प्राप्त छन्हि। ओ लोकनि उच्च कक्षा धरि पाठशालामें पढ़ि सकैत छथि, थियेटरमे भाग लय सकैत छथि ओ क्लब (नृत्यालय) मे नृत्य गीतादि सानन्द सीखि सकैत

छथि । परन्तु की अद्यावधि क्यो ई विचार कयने छथि जे हुनका लोकनिक आभ्यन्तरिक दशा की छन्हि ? यदि यथार्थ पूछल जाय तं हम निस्सङ्कोच ई कहव जे हमरा देशक अपट् स्त्रीगण विलायतक शिक्षित कहौनिहारि स्त्रीगणक अपेक्षा स्वामिभक्ति, सच्चरित्रता, गृहकार्यपटुता इत्यादिमे बहुत बढलि चढलि छथि । भारतीय महिलागणकेँ पाश्चात्य महिलागणजकाँ स्वयं अनेक वर्ष धरि वरान्वेषणमे तं नहि घूमय फिरय पड़ैत छन्हि । हुनका लोकनिक वयस ओ समयक अधिकांश स्कूल, कालेजमे पढ़वामे, नाचगान, वजान प्रभृति सिखवामे लगैत छन्हि तखन हुनका लोकनि गृहशिल्प, एवं धार्मिक शिक्षा, पति-शुश्रूषा प्रभृति कहाँ तक कय सकतीह । प्रत्युत एहि सभसँ हुनका लोकनिकेँ घृणा भय जाइत छन्हि । ई मुख्य अन्तर प्राच्य तथा पाश्चात्य शिक्षामे अछि जकर परिणाम फल जाति पर पूर्णतया पड़ैत छैक ।

#### TRANSLATION FROM NEPALI INTO ENGLISH

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*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following :—

(a) प्रातःकाल भए पछी गत रात्रीको यो घटना थाह न पाउने 20  
दुनियाँमा आज रामको राज्याभिषेक हुन्छ भन्ने हर्पले टाँउ टाँउमा बाजा,  
नाच र गान भइ रहेको थियो। रामलाई गद्दीमा बसेको क हिले देखेवाँला  
भनी सवैजना यता उता हडबड साथ हिड्न लागेका थिए। रामचन्द्र पनी  
व्यहानको कर्म समाप्त गरेर उत्तम उत्तम वस्त्र र अलङ्कार पहिरी राजतिलकको  
अपेक्षामा वस्नु भएको थियो। सीताजी पनी आज मवडा महारानी हुन्छु  
भनी खुशी हुदै रामचन्द्रको सेवामा तत्पर हुनुभएको थियो उता  
कौशल्या महारानी पनी आज मेरा प्राणप्यारा पुत्र रामले राज गद्दी पाउन  
आँटे, धन्य मेरो भाग्य ! भनी आफनु प्रशंसा गर्नलागेकी थिइन् मेरा  
प्यारा दाज्यू राजा भए भने आनन्द पूर्वक उनैको सेवागरी बस्न पाउँछा  
भनी लक्ष्मण पनी खुसी थिए। परन्तु त्यस वेला खुशी हुनाका बदलामा

रुनु पर्ला, घोडा, हात्ति रथ पाउनाका बदलामा पत्थरले खडबडभएको जमिनमा हिडनु पर्ला, सुखका बदलामा दुःखै दुःख भोगनु पर्ला, बहुमुल्य कपडाका बदलामा रुखकावोक्रा लाउन पर्ला भन्ने कसैलाई स्वप्नामा पनि थिएन।

(b) द्रोणाचार्यको यसवचनले गर्दा कर्णको उत्साह बढ्यो उनी 20 फेरी युद्धमा तयार भए। त्यस वेला विचरा बालक अभिमन्यु धेरै बेर सम्म संग्राम गर्दा थकित भइ शकेका थिए। तैपनी उनले संग्राम देखी हटनु उचित देखेनन्। आफनु वीरता लाई कति कति नगराई लड्न थाले युद्ध हुँदा हुँदैमा कर्णले अकस्मात् अभिमन्युको हातको धनुकाटी गिराइ दिए। त्यसै माँकामा भोज नामक र्याँटा राजाले उन कार थका चार घोडालाई मारिदिए। कृपाचार्यले पृष्ठरक्षक योद्धाहरूर सारथिलाई मारिदिए। अब के थियो ? कातर एक साधारण योद्धा पनि अभिमन्यु सँग लड्न अधिमर्न थाल्यो अधर्मी कौरवपक्षमा धर्माधर्मको केही विचार थिएन। छछवटा महावीरहरूले युद्धनियमलाई छोडी अस्त्र र रथनभएका एकटा बालक अभिमन्युको उपर बाणको वर्षागर्न थाले। यस्तो आपत्ता पनि वीर अभिमन्युले संग्राममा पीठ देखा उने र पछि हट्ने समेत विचार गरेनन्। कति नडराएर उनी माँटेले पानीको वर्षालाई सहैझै बाणवृष्टि सहेर रणभूमिमा स्थीर भइ रहे। धन्य वीर बालक ! क्षत्रियले वीरता देखाउने समय यस्तै हो।

(c) अघी इनका बाबु जमदग्निलाई क्षत्रि यहरूले विना पराधमा 20 मारेका थिए। यसैले आफना बाबुका बधको बदलाका लागी क्रुद्धभएर ई परशुरामले एकाईश पटक सम्म पृथिवीमा धुमीधुमी पाएजति क्षत्रियको संहार गरिशकेका थिए। पछी पृथिवीतलमा क्षत्रिय न पाउदा क्रोधको वेग घटनाले केही शान्त भई इनी एकान्तवनमा तपस्या गरेर वसेका थिए। यस्तैमा धनु भाँचनु आदि रामको पुरुषार्थ सुनी, रामचन्द्र पनि क्षत्रिय हुनुभन्ने बुझेर एसलाई पनि दण्डदिन्छु भनेर वहाँकै खोजमा हिडेका थिए। संयोगले बाटामा उत्सवसाथ आउन लागेका रामलाई देखी उनले अगाडी गएर भने, “बच्चा, के जनकको धनु भाँचेको तै” लेनै हो ? वडो वीरहुम् भन्ने घमण्ड छकि ? हेरू अब कत्तिको पुरुषार्थ देखाउन शक्ती रहिछस् यो ब्रह्मदण्डमा पनि ताँदो चडाउन शक्छस् कि ? परशुरामका यस्ता क्रोध



पूर्ण वचन सुनी महात्मा रामले भने केही भन्नु भएन, तर लक्ष्मणजीलाई  
 असह्य हुँदा उनी हेलंको हासो गर्न थाले तिनीले हासेको देखदा शन  
 परशुरामको क्रोधाग्नि दन्दायो।

# TRANSLATION FROM URDU INTO ENGLISH

Paper-Setters—{KHAN SAHIB REZA ALI WAHSHAT.  
 MAULVI MD. ISHAQ, M.A.

Candidates are required to give their answers in their own words  
 as far as practicable

The figures in the margin indicate full marks.

Translate into English any two of the following extracts :—

A

20

جتنی چیزیں ہیں سب کو زمین اپنی طرف کھینچتی ہے ۔  
 جو چیز اربہ کو بھینکتے ہیں کچھہ دور تو بھینکنے والے کے زور سے  
 اربہ کو چلی جاتی ہے بھر آخر کو زمین کی کشش اُسکو نیچے  
 کھینچ لاتی ہے ۔ پھر کو اربہ بھینکو اور دیکھتے رہو تو ایسا معلوم  
 ہوگا کہ جوں جوں اربہ کو جاتا ہے اُسکی جال سست ہوتی جاتی ہے  
 اور بھر جو اُلٹتا ہے تو تیر کی طرح زمین کی طرف درڑتا ہے ۔  
 س سے صاف ثابت ہے کہ چیزیں زمین کی کشش کے مارے اربہ  
 کو نہیں جانا چاہتیں اور جو جاتی ہیں تو بڑی مشکل سے ۔  
 اسی طرح جب آدمی کسی اونچے مقام پر چڑھنے لگتا ہے تو اُسکے  
 بدن کا بوجھہ اُسکو روکتا ہے لیکن یہ زبردستی جاتا ہے ۔ اسی واسطے  
 اربہ جانے میں بڑا زور بڑتا ہے اور آدمی جلد تھک جاتا ہے ۔  
 بھر جب آدمی اربہ سے نیچے اترنے لگتا ہے تو کیسے جلدی جلدی  
 نیچے اتر آتا ہے \*

B

20

جب میں کشتیوں کو دیکھنے گیا تو مابجھروں نے مجھے گھیر  
 لیا اور ہر ایک اپنی اپنی کشتی کی طرف مجھے گھسیٹنے لگا ۔  
 تیس چار کشتیوں کا معائنہ کیا مگر کوئی بسند نہ آئی ۔ جو کشتی  
 اچھی سچی تھی اُسکا کرایہ بہت زیادہ تھا اور جسکا کرایہ کم تھا

اُس میں سامان ضرورت سے کم تھا - چونکہ اُس وقت اندھیرا ہو رہا تھا اور زیادہ کشتیوں کا خاطر خواہ معائنہ نہیں ہو سکتا تھا اسلئے میس نے ارادہ کیا کہ آج کی شب بھی ہوٹل میں رہوں اور کل صبح کو پہر آؤں - چنانچہ ہوٹل کو واپس جا رہا تھا کہ عزیزا نام ایک مانجھی میرے پاس آیا اور کہنے لگا ”مہربانی کر کے میرے کشتی کو بھی دیکھ لیجئے - اس میں ضرورت کا سب سامان موجود ہے اور کرایہ صرف پچیس روپیہ ماہواری - میس آپکا سب کام کررہا تھا بھی پکارنگا - آپ نہ بارچی ہی ضرورت ہوگی نہ کسی اور نوکر کی“ - میس نے اُسی وقت کشتی کو جا کر دیکھا اور پسند کیا - عزیز نے کہا ”کشتی پچیس روپیہ ماہوار پر صرف ایک مہینے کے واسطے دے سکتا ہوں“ \*

C

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اگر ماں باپ محبت سے اولاد کو نہ پالتے تو بچے بھوکوں مرجاتے - کہاں سے اُنکو روٹی ملتی کہاں سے یہ کپڑا لاتے اور کیونکر برے ہوتے - جانوروں میں بھی اولاد کی محبت بہت ہوتی ہے - مرغی بچوں کو کس طرح پالتی ہے - دن بھر اُنکو ہروں میں چھپائے بیٹھی رہتی ہے - ایک دانہ بھی اناج کا اُسکو ملتا ہے تو آپ نہیں کھاتی بچوں کو بُلا کر چونچ سے اُنکے اُگے رکھ دیتی ہے - اور اگر چیل یا بلی اُسکے بچوں کو مارنا چاہے تو اپنی جان کا خیال نہ کر کے لڑنے مرنے کو تیار ہو جاتی ہے - غرض یہ خاص محبت ماں باپ کو صرف اسلئے خدا نے دی ہے کہ نفع نفع بچوں کو جو ضرورت ہو اُنکی نہ رہے - بھوک کے وقت کھانا اور پیاس کے وقت پانی سردی سے بچنے کو گرم کپڑا اور ہر طرح کے آرام کی چیز وقت مناسب پر مل جائے - دیکھنے سے یہ بات معلوم ہوتی ہے کہ یہ خاص محبت اُسی وقت تک رہتی ہے جب تک بچوں کو ضرورت اور احتیاج ہوتی ہے - جب مرغی کے بچے برے ہو جاتے ہیں تو وہ اُنکو ہروں میں چھپانا چھوڑ دیتی ہے \*

## TRANSLATION FROM MARATHI INTO ENGLISH

*Paper-Settlers*—{PROF. D. R. BHANDARKAR, M.A., PH.D.  
MAHAMAHOPADHYAY PANDIT SITARAM SASTRI.

*Candidates are required to give their answers in their own words  
as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :—

(a) श्रीमंती ही ह्यणजे ह्या जगांत वांटलेली आहे असें नाही. ती 20  
कोणापाशीं असते व कोणापाशीं नसते. पुष्कळांस तिचा मंसर्ग देखील  
नसतो. जाडे भरडे अन्नवस्त्र मिळाले ह्यणजे तेवढ्या पुरते संतुष्ट  
राहण्याची संख्या बरीच मोठी दिसून येते. तशांत खरोखर श्रीमंती ह्यणजे  
काय हेच समजणे मोठे कठीण आहे कारण तिला ह्यणजे कधीं कोणीं  
कांटयांत घालून तोलले आहे असें नाही. अर्थात एकाची जी श्रीमंती  
ती दुसऱ्याची गरीबी. ह्यणून श्रीमान होण्याचा प्रयत्न जो आहे तो चांगल्या  
रीतीने होत असेल, तर मनुष्याने अवश्य करावा, करूं नये असें नाही.  
तरी सर्वासच तो साध्य होईल अशी त्याच्या विषयीं खात्री नसते. परंतु  
तेच प्रत्येक मनुष्याने असें जर झाले कीं, माझी दानत मी उत्तम  
प्रकारची ठेवीन, अर्थात माझे आचरण होईल तेवढे मी निष्कलंक ठेवीन,  
तर हे बरीक त्यास खचित साध्य होणार आहे.

(b) वनवासाचे क्लेश सहन करणे भाग पडून राज्यपद हातचे 20  
गेलें, व भरताला ते प्राप्त झाले, ह्याबद्दल रामाला वाईट वाटले नाही ;  
व त्याचा त्याने मत्सरही केला नाही अयोध्येहून निघते वेळीं तद्वासी  
पौरांना त्याने केलेल्या उपदेशावरून त्याच्या निष्कलंक मनाची अटकळ  
होतेतो उपदेश असा, “अयोध्यावासी जनांची जशी प्रीति मजवर आहे, मला  
तेजसा मान देतात, तशी प्रीति व तसाच मान, किंबहुना त्याहीपेक्षां विशेष,  
त्यांनीं भरताला द्यावा भरताचे वर्तन शुद्ध आहे तुम्हाला प्रिय व  
हितावह असेल तेच तो करील. भरतवयाने लहान अहि तरीपण तो  
ज्ञानसंपन्न, मृदुभाषी, शूर व गुणवान् असून योग्य रीतीनें राज्यकारभार  
करण्या सारखा आहे.” ह्यावरून उघड दिसते कीं, कैकेयीच्या दुष्ट कृतीनें  
संतापून जाऊन रामाने भरता विषयीं आपले मन कलुषित होऊ दिले  
नाहीं ।

(c) માણી સર્વજનાંસ એવઢીચ વિનંતિ આહે કીં, તુઢી સર્વજન 20  
 વિચાર કરણ્યાસ લાગા, વાચાવયાસ લાગા, નવીન ગ્રંથ વ વર્તમાનપલેં વાચા.  
 વ તુમચે શેજારીં કાય હોત આહે યાચા વિચાર કરા. હં'ગ્રજાંમધ્યે' કિતી  
 એક ચાંગલે ગુણ આહેત વ તે તુઢ્યાંસ પ્રાપ્ત વ્હાવે હાગૂન ઈશ્વરાને' ત્યાંચી  
 તુમચી સંગત ઘાતલી આહે, હેં લક્ષ્યાંત આળા સારસમાર પહા, પરંપરા  
 આંધઘ્યાચીમાઠ લાગલી હાગૂન તીચ ચાલવૂં નકા. ધર્મશીલ, ઈશ્વરતત્પર  
 વ્હા. હ્યા ગુણાંવાચૂન સર્વ વ્યર્થ આહે સત્ય વોઠા; દુષ્ટ વાસના સોડા;  
 ધર્મ સુધારણા કરા; હાગજે ધર્મ ટાકૂં નકા, પરંતુ ત્યાચા અર્થ ઘ્યાવા તસા  
 કાઠ પાઢૂન ઘ્યા. વ ઈશ્વરા સંબંધીં આગિ જગાસંબંધીં જ્ઞાન જગાંત વૃદ્ધિંગત  
 કરા; આલ્સ સોડા

TRANSLATION FROM GUJARATI INTO ENGLISH

Paper-Setters— { DR. I. J. S. TARAPOREWALA, B.A., PH.D.  
 { PANDIT HARGOVIND DAS SETHI.

Candidates are required to give their answers in their own words  
 as far as practicable

The figures in the margin indicate full marks

Translate any two of the following passages into English—

(a) અસલ ન્યારે રાન્ય સ્થાપન થયાં ત્યારે જખરાની સામા નખણાનું 20  
 રક્ષણ કરવું એજ રાન્ય કરનારનો મુખ્ય ધર્મ હોતો, અને રાન્ય સ્થાપવાનો  
 એજ હેતુ હોતો. જે સઘળા પોતપોતાની મરજી પ્રમાણે જે તેઓની નજરમાં  
 ગુઢો લાગે તેનું વેર લે, તો જનસમાજનું ખંધારણ તુટી જાય, લોકો એક  
 રાની પશુઓનાં ટોળાં જેવા થઈ જાય, જન માલની સલામતી રહે નહિ,  
 અને માણસના સુખનો નાશ થાય એટલુંજ નહિ પણ તેઓનો થોડી મુદતમાં  
 અંત પણ આવે. માટે જે ઠેકાણે સારા અંદોખસ્તવાળું રાન્ય છે, ત્યાં ખાનગી  
 રીતે વેર લેવાનો કોઈને અખત્યાર નથી. જે માણસને નુકસાન લાગ્યું હોય  
 તેણે પોતાની મેળેજ કાયદાનો અમલ કરી સામાને પોતાની મરજી પ્રમાણે  
 શિક્ષા કરવાને બદલે રાજની આગળ ફરિયાદ કરવી અને તે રાજ ત્રાહિત  
 માણસ હોવાથી તેને ખેમાંથી કોઈ ઉપર ધણું કરીને દુશ્મનાઈ હોતી નથી,  
 તથા જે દુશ્મનો વચ્ચે જે ભુસ્સો તથા અંટસ ધણું કરી હોય છે, અને તેથી  
 તેઓની (વેકળુદ્ધિ ઉપર જે પડેલો વળી જાય છે, તેમ રાજને થતું નથી.  
 તે હમેશાં નિષ્પક્ષપાત તથા શાંત વૃત્તિનો હોવો જોઈએ; તેથી તે ખંનેનો  
 ગુઢો તપાસવાને, તેઓમાંથી વધારે કસૂર કોની છે તે શોધી કાઢવાને, તથા  
 જેનો ગુઢો માલમ પડે તેને ધટી' શિક્ષા આપવાને વધારે લાયક અને છે.

(b) આ હુન્નરશાળાની શરૂઆત કરતી વેળા અનેક ડેહાણેથી ચંકા 20  
 બતાવવામાં આવી હતી કે પારસીઓ એવા ઐયારસી થઇ ગયા છે કે હાથ  
 રગડી કામ કરવા કોઇ આ શાળામાં આવનાર નથી અને તેથી એ ઉપર  
 લીધેલી મેહેનત અને પૈસાની ખર્ચાદી થશે. તે છતાં આવી એક અગત્યની  
 બાબતને પડતી ન મુકતાં એક અખતરા તરીકે શરૂ કરવાનું હોમોએ વાળખી  
 ધારી માથે લીધું હતું, તેનું પરિણામ કેવું આવ્યું છે તે ૧૯૩૦ ના સાલના  
 જ્ઞા રીપોર્ટ ઉપરથી માલમ પડશે. ફક્ત ૧૧ કામદારોની શરૂઆતની સંખ્યા  
 ઉપરથી ૧૯૩૦ ના સાલની આખેરીએ ૮૧ ની સંખ્યા પારસી કામદારો તથા  
 શીખાઉઓની નોંધાઇ છે અને ૧૯૩૧ ના ચાલુ સાલમાં તો તેઓનો ચાલુ  
 વધારો થતો જાય છે. આ ઉપરથી ખુદલું સાબિત થાય છે કે આ  
 હુન્નરશાળાએ સવાળે વર્ષના અરસામાં પોતાની હૈયાતીની અગત્ય અને  
 ઉપયોગીપણું પુરવાર કરી આપ્યું છે, અને એ બીના ખરેખર ખુશી થવા  
 જોગ છે.

(c) કુંવરને કહાણીઓ સાંભળવી બહુ ગમતી વાતોની લાલચે તે હોંસે 20  
 હોંસે ભણતો. પાઠ સારા શીખે ત્યારે રાજમાતા તેને મનોરંજક કહાણી કહી  
 કહેતાં કે આવતી કાલે પણ ડાહ્યો થઈને ભણીશ તો બીજી સારી મળની  
 વાત કહીશ. ઈશુની કે અનીતિની વાતો કદી કહેતી નહિ. બાળકથી સમજાય  
 અને તેના મનને રંજન કરે એવી બોધ કારી ને ઉપયોગી કહાણીઓ  
 કહેતી. ઈશ્વરભક્તિ, સત્ય, શૂર, દયા, સાહસ, પરોપકાર, પરાક્રમ, સ્વદેશ  
 પ્રીતિ, સહયતાદિક સદ્ગુણોનો મનમાં ફેલાવો કરી એવી જુની વાતો આ  
 વડતી હોય તો તે અને બીજી નવી જોડીને કહેતી.

#### TRANSLATION FROM MANIPURI INTO ENGLISH

Paper-Settlers— { Mr. SANJIBAN NADIA SINGH.  
 ,, RAJKUMAR ATOMPISAK SINGH.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks.*

Translate any two of the following extracts into English :—

(a) \* નિશ્ચિનાં ત્વિવ્રવદિ દ્રુદેવુ પાઉં ઇત્તવા ગ્રાહે । દેનાકથુનવા નિપા 20  
 અયગી દ્રુદે અમા લેનગમદે । દ્રુદે અદ્ર મુમિંચુ થુનિશી હેક નોઉડાનવગ્ગ  
 મહકા ડાંક થાઉં અમા ગ્રાન્નુના ડાકૌ લોહિશંદા કાચિદના લોહિશંદા

ধোংজিনা কমহনা হেক মলৈকুই। হুই অহু লোইশংগী মপু অহুনা  
করিগুচা চিঠিনচিংবা লাইরিক থরা হাপ্পিড্রিবা মথৈ অহুনা ঙাইহুনা লৈ।  
লাইরিক অহু হেক হাপ্পিগা ময়ুম য়োনবা চেপুনা চংথি। মাসি মাগী হুমিং  
খুদিংগী থবক ওইথুে, করিগুচা অমতনা লমখাংদা হুই অহুবু বৈখাই  
ধিনগাইবা যাদে।

(b) ঈশ্বরনা মথবাই পানবা, পান্দবা, লৈপাক্তগী হোরকপা পোং 20  
পুম্মক অসিবু শেখিরমই। মরম অসিনা ঈশ্বরবু তেংবানবা শেখিবা মপু  
হাঙ্গিনা কোই। ঈশ্বরবু কনা অমতনা উবা ফংদে; তোইগুচসুং ইবুংঙো  
মহাক্তি মতম লৈবা থিবিক্তা মফম পুম্মক্তা ইথুং থুংনা লেংদনা লৈ।  
ঐথোইনা তোজরিবা পুম্মক অমি ইবুংঙো মহাক্তি হুই উবি; ঐথোইনা  
নিংজরিবা পুম্মক অহু ইবুংঙো মহাক্তি ইথং থংবি। ঈশ্বর হাঙ্গিবা  
অসিদি পোইদোক্কা থোজালহৈ; ইবুংঙো মহাক্তি জীব পুম্মক্কো চিঞ্জাক  
পিবি, অমসুং ঙাকপিহৈবা মপুনি।

(c) কনা কনাগুচা জীবশিংনা মতম কুইনা পুনশি, কনা কনাগুচা 20  
জীবশিংনা মপুনসি তেল্লি। শামু হাঙ্গিবা অসি চহি চামকম পুনশি।  
শগোনা চহি কুনমকম পুনশি। হুইনা চহি তরা মরি মঙা অম্মম পুনশি।  
তৌল কোজ্জেং হাঙ্গিবা অসিনচিংবা পুম্মককনা চহি অমরোমদগী হেল্লা  
পুনশিদে। কনা কনাগুচা তীনা পুং অমতা পুনশি। য়ান্না পিকথুবা  
কাংগী জাংনা মুংগা মঙান্দা ঙাইহক্তংদা শান্নরন্নগা লৈপাক্তা তোপ তাই  
অমসুং শি। য়ী হাঙ্গিবা অসিদি জীব পুম্মক্কো মতম কুইনা পুনশি।

# TRANSLATION FROM KHASI INTO ENGLISH

Paper-Setter—MR. ROY ROWLAND THOMAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :—

(a) Naduh ba dang thaw ia ka pyrthei u dieng uba jrong uba poi sha 20  
dah suinbneng, u la long ba khar une u lun bad la pyndonkam ia u da  
ki riewbneng kum ka tyngkieng ban kiew bad ban hiar hapdeng ka bneng  
bad ka khyndew. Ha ka'u ka per ka pyrthei ka long ka byndon nong-  
ahong shnong, hynrei baroh ki jaid dieng bad syntiew ki long kyrhai,  
kumta ka la long ka jaka kaba itynnad shuhun, bad kito kiba na bneng  
ki la wan hiar bausien ban iaid kai bad ban shom jingangewbha baler  
iong ka.

(b) Ha ka spihnem kaba 18 la kha ba Scotland ia u khynnah uba 20  
kyrteng U James Watt. Naduh ba dang khynnah u la sngewbha eh ia  
ki kynja kor, bad ka jingisthuh khana ka ong ba ha kawei ka jaunied  
katba u dang shong ha iing hajan ding u la peit ia u ketli uba la bul

halor ding ban thnam. Katba u peit u la iohi ia ka tdemum ba ka sdang ban mih na u ketli. Ka tdemum ka la mih na ka khmut u ketli. kumta U Watt u la pyrkhat ba un set ia ka khmut bad khmieh kan jia aiu.

(c) Bad U Trai U la phah ia U Nathan sha U Dabid. U la wan te sha u, bad u la ong ha u. Ki la don arngut ki briew ha kawei ka shnong, uwei u riewspah bad uta uwei u duk. Uta uba riewspah te u la don shibun ki kynhun langbrot bad masi, hynrei uta uba duk um shyin don ei ei hynrei tang iwei i khun langbrot iba rit ia iba u la thied bad ba u la bysa, te i la nanz san lem bad u bad lem bad ki khun jong u, na ka jingbam jong u i la ju bam, bad na ka khuri jong u i la ju dih, bad ha ka shadem jong u i la ju thiah, bad i la long ha u kum ka khun. 20

## TRANSLATION FROM GARO INTO ENGLISH

*Paper-Setter—Mr. F. W. HARDING*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Answer two only of the following three questions.*

1. Translate the following into English :—

20

Switzerland asong uni abrirangni gimin mingginga, maina uarang European chubutipa aa onga. Uni akimbrirangni gisepe Mt. Blanc aro Mt. Matterhorn chuata. Uni climate kasina aro namani gumu bilsianti dingkarimtingo America aro European gipin gipin asongrangni hajalni bajal manderang uchi reronga. Akawerango aro nitogipa chibolrangni rikamrango banga songjinma aro songiang donga. Ia songjinmarangni karkanarango ghorirangko aro kalgrikani bosturang rokom rokomko daka. Iarango banga asongrangni dokanrango biena mana Uamang mongma wagamniko nitoatanirangko kita Mechukrang pul deani aro laceko dakna changbea aro iarangkoba gipin gipin asongrangchi watata.

Napoleon Italyko amua Alps abrirangko latahaon sal banga nangachim. Daode regnani gri Simplicon Tur nechi Alpsko Switzerlanddoni Italyona batna mana. Bilsa 1966-o ia aningko chee dakgimin ramako matchotaba Mande sak bajal chikung uko abrin ningo chona bilsa chet nangaba. Ua mail chignimang roa aro reil rama gnang.

2. Translate the following into English :—

20

Changao song damsao Rip Van Winkle minggipa mande sak sa gnaangchim. Ua antangni jik dedrangna kam kae alduoa aratsranggipa ongachim. Ua arate pangnan gipin manderangni nokrangosa rona reangrongachim, aro idake rorongani gimin songoni aekakrangnan uko singpiljaba. Ia mandeara sikar kana changbegipa ongachim, indiba noktanghi reangode, aratan giminan jikgipa uko pangnan manengrongachim. Ua sikar kao rimbitgipa nambegipa achak mangsa gnangchim, ua nokzipana bebeko dakrongachim. Rip Van Winkle matburunrangni beenko manoba, gipinrangna sualari nokowae ontiprakkosan rabarongachim. Ontiprakkosan rabarongaba uni jikgipa namnikrongachim. Sal sao Rip Van Winkleni arate noko tuengako nioa jikgipa uko namen kaonangaba. Unon ua tusiako golmal kana jikgipako kaonango antangni achakko rimbite sikar kana ine slai rae reangaba. Songjinmanj nok nokaona sokoa uno roe burungchi rena nangakode gualsarangaba. Indiba atamchibara ua burunga reangaba. Reangon reangon ua burung bolgrimni kasin jrimjrim dakgipa bakona sokangaba.

## 3. Translate the following into English :—

20

Jihova Nathanko Daudona watataha. Aro ua nona rebae una aganaba, Songjinma damsao mande sakni gangchim; saksu mane chagipa aro sakgipin kangalgipa. Mane chagipao dobok aro matchu jakrang namen bangbeachim. Indiba ua kangalgipao atangni bree aldumitanggipa mes bima bisa mangsana agre mamungba grichim. Aro ua un baksa aro uni dedrang baksa dalroroaha; ua autangni chaani bakoniko chapaachim, aro uni ringchakaoniko ringpaachim, aro uni kabako tuachim, aro una demechik gita onzachim. Aro mane chagipaona songregipa suksa rebaha. Unon ua atangona rebagipa rama regipa mandena sachina antangni dobok jak aro matchu jakoniko rana kasae, ua kangal mandeni mes bisako rae uko uona rebagipa mandena sachiaha. Unon Daudni kaonanga ua mandeni kosako namen chingchabeaha. Aro ua Nathanna aganaba, Jihovani tanga gita, iako dakgipa mande sina kragipa. Aro ua iako dukahani gimin, aro uno kasachaka dongjahani gimin, ua mes bisani changbriko onskana nanga.

Unon Nathan Daudna aganaba, Naan ua mande. Israelni Isol Jihova indine agana, Anga nangko Israelni kosako raja onga to nongaha, aro anga nangko Saulni jakoniko yokataha; aro anga nangna nangni giteltangni nokko, aro nangni kabakona nangni giteltangni jikrangko onaha; aro anga Israelni aro Jihudani machongrangko nangna onaha; aro uan bangjadugaode anga nangna indaka indakarangkoba ondapgenchim. Jihovani nikao nangjakako dakna maini gimin naa uni katako chonnikaha? Naa Hitt mande Uriako tonualchi dokaha, aro antangni jikgipa ongchina uni jikgipako rimaha; aro naa uko Ammonni dedrangni tonualchi sootaha.

## TRANSLATION FROM LUSHAI INTO ENGLISH

*Paper-setter*—REV. E. L. MENDUS, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following passages into English of your own composition :—

(a) Tin, a sawtu pangngai v&ek chuan 'Ka buhte chu a z&enab khung rawh u' a han ti leh a. Chutichuan, mi tamtak chu hrui chhoh va, chh&um zinga awn ta in ka hmu a; kei erawhchu hnutehhiabin ka awn a. Bihr&ukna te ka han zawn; chuan thin a, ka hmu thei si lo va, chumi chh&um zinga thu lah chuan ka chungah hlir a mit a ngbat baw si a; ka sualte ka lo bre chhuak a, ka chhialehthabriatna chuan kil tin ah min bak a tin ka harh ta a' a ti a. 20

Tin, Kristiana chuan 'A eng ber chuan nge chuti &em a tihlau che?' a ti a. Tin, mi chuan, 'Ele ror&lna ni chu a lo thleng ta niin ka ring a, ka la inpeih hauh si lo va, chu chuan min tihlau a ni. Tin, mi tihlau bertu chu, angel hofen mi thenkhat chu an lo la khawm a, kei chu min lo hnutehhiab bik a, bremhmuu kawngkhar chu ka bul lawkah chuan a lo inhawng reng baw a, chu chu ka hlau ber a ni. Ka briatna pawhin min tihreawm &em &em bawk ani. Ror&ltu chuan ka chungah riak a mit a ngbat a, chu chu a thinur mi entirna niin ka ring baw si a ni' a ti a. Tin, Hrilfah tua chuan, Kristiana huenah chuan 'Heng thil zawn zawn hi i ngaituah em?' a ti a. Ani chuan 'Ngaituah e, beiseina min siam a, min tihlau baw a ni' a ti a.



(b) Rinawma a chuan, 'Ngawi teh rih, a pakhat chauh chu i ngaihtuah rih teh ang. Rihum amah in sual huat a tum tur a ni, i ti zawk tur niin ka ring e.' a ti a. 20

Dangnala chuan, 'Sual avanga tah leh sual huat chu engge a danglam na?' a ti a.

Rinawma chuan, 'Nasitakin a dang a ni. Mi sual avangin an tap thei; nimahsela sual chu a haw lo thei a, miha kh fel chu a haw zawk thei a ni. Pulpotah te sual avanga tap mi tanitak ka bre tawh a, nimahsela an rilru chu an totiah te leh an in lamah te mai a cheng si. Josepha piewu thianghlin, tak ni awmin aw ring takin a an va, nimahsela Josepha huenah chuan thil thianghlin lo tak tih a tum si. Nuen an fate an sual e tun an dem thim a, nimahsela an mal chungah an chaw a, an fawp leh si thin ang hian mi thenkhat chuan sual an dem thim a ni,' a ti a.

Dangnala chuan, 'Dawt i sawi a ni' a ti a.

Rinawma chuan, 'Daw teh suh e, a diktak ka sawi zawk a ni. A nih leh engugeni rilrua khawngah thiltih hmuah chhuahna thil pahnhna i tih chu?' a ti a.

'Chanchin i ha thilnak briatna hi,' Dangnala chuan a ti a.

- (c) Lunggâr hmêl rêng rêng a awm lâwng, 20  
 Angelte lûi lènna an chuan;  
 Khawvêl lungngaih tuara rûm te'n,  
 Tah lûi bângin Lalpa an bêl.  
     Lalpa, chur rau chu mun thlirtî la,  
     He khawvêl a ka lèn lûi hian;  
     Lungngaih tuara ka tahna hi,  
     Aw, nêu takin ka tuar ang e.  
 Aw chu hmuah engte zawng chuan,  
 An then tûkte an ngaih loh nân;  
 Nûn na lung oh tur an in e,  
 An tabâk—lâwma hawdopâr nêu.  
 Thlir zêl ta, hu an ropu chu,  
 Angel vâi leh Vâiparh Ar-i;  
 Romei a zâm lung a lêng zual,  
 Berâm No tual lènna a ni.  
 Chu hmuah ropu ka thlen hun chuan  
 Kei pawh Lalpa mun awmpui ang;  
 An el vâite zînga lêngin,  
 Chutuan Lalpa ka fak ang.
-

## TRANSLATION FROM MODERN TIBETAN INTO ENGLISH

*Paper-Setter*—MR. KARMA SAMDON PAUL.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

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(a) དེའི་རྒྱལ་སྤྱི་མཐའ་ཁོ་བོ་མ་ཤིང་བྱུང་གི་རྒྱལ་པོ་ཤིང་ཁྱིམ་ཅན་པོ་ཞེས་བྱ་བ་  
དེ་ལོག་པའི་སློ་བྱུང་དེ་ཁོ་རང་གི་འཁོར་ལྷན་ལས་ལས་ནས་སྤྱི་བ་ལ། ང་ཡི་འཁོར་ལྷན་ས་  
བདག་ལ་ཚུར་ཉན་དང་། ཡུལ་ཕྱོགས་སྒྲེ་དེའི་བྱོང་བྱིར་ཆེན་པོ་ན། རྒྱལ་པོ་དྲི་མེད་ཀྱན་  
ལྷན་ཞེས་བྱ་བ་དེས། མོར་ལྷན་སྤྱི་བར་གཏོང་བར་དམ་བཅས་ནས། ཕྱོགས་མེད་སྤྱི་བ་  
པ་ཀྱན་ལ་བཏང་བ་ནི། ཀྱན་གྱིས་སྤྱི་བ་པ་ལོས་རྒྱ་བས་བོས། ཁོང་གི་མོར་བྱ་དགོས་  
འདོད་དཔུང་འཛུམས་དེ། སློང་དུ་འགྲོ་ལྷན་སྤྱི་བ་ཡོད་དུ་སྤྱོད། དེ་ལ་ང་ཡི་རྒྱལ་སྤྱི་བ་  
ལྷན་རོ། དེར་བས་ཟེ་ཆེན་པོ་ཁོ་མོ་སྤྱི་བ་ཅམ་ཡང་མེད་པ་ཞིག་ལངས་ནས། རྒྱལ་པོ་  
ཆེན་པོ་བདག་གིས་འགྲོ་བར་ཉུའོ། ལས་ཆས་དང་གོས་ལྷན་སྤྱི་བ་ཞིག་ཟེར་རོ། དེར་རྒྱལ་  
པོས་ལས་ཆས་དང་གོས་ལྷན་སྤྱི་བ་ནས་བཏང་ངོ། དེ་ནས་བས་ཟེ་དེས་ལ་ཁྱང་མང་པོ་བཀལ་  
ནས་རྒྱེ་དེའི་ཡུལ་དུ་བསྐྱོབས་པ་དང་། པོ་བྱང་གི་སློ་ཕྱིར་ཡོས་སློ་ལ་ལག་པ་བཀལ་ནས་  
མིལ་མཆེ་མ་ཇ་ཇེ་བྱས་ནས་བཟུང་བས། སློན་པོ་གཅིག་བྱང་ནས་ཆད་པོ་གང་ནས་ཡིན་སྤྱི་

འདོད་པ་ཡིན་ཟེར་བ་དང་། བུས་ཟེན་རེ། བདག་གི་ས་ཤིང་དུང་ནས་ཡིན་ཀྱལ་པོ་དྲི་མེད་  
ཀྱན་ཐུན་ལ་ཟས་ནོར་ཅིག་སྟོང་དུ་འོངས་པ་ལགས་ཞུསོ།།

(b) བདག་གི་ཡུལ་ཆེན་སྤྱན་ཆབ་མ་འདོན་ཅིག། ཁྲམས་གསུམ་འཁོར་བའི་མེས་མ་  
ཅན་མཐམས་ཅད་ཀྱང་། འདུས་ནས་བུལ་བ་ཀྱན་གྱི་ཆ་འཕགས་ཡིན། ཡུལ་ཆེན་བདག་ལ་ཐུགས་  
ཡིད་འཕྲེང་བ་འདི། ཤ་ཁྲག་འཕས་ནས་གཅད་པའི་ལོས་ཀྱང་བདེན། མ་ཉེས་ནས་གཅིག་  
མཐའ་ནས་ལངས་དུས་ཡོང་། ཆོ་འདོར་ཡུམ་སྤུས་མཇལ་བའི་སྟོན་ལམ་འདེབས། གལ་ཏེ་  
ཆོ་འདོར་འཕྲད་པར་མ་བྱུང་ན། བྱི་མ་དག་པའི་ཁྲིང་དུ་མཇལ་བར་སྟོན། ཞེས་ཞུས་པ་དང་།  
དེར་ཡུམ་གྱིས་སྤུས་ཀྱི་ཐུག་ནས་འཆང་ཕྱེ་སྤྱན་ཆབ་མང་དུ་ཤོར་རོ། དེ་ནས་ཡུམ་གྱི་ཐུགས་  
ལ་བདག་གི་བྱ་འདི་ལམ་ཐག་རིང་པོ་ལ་འགྲོ་བ་ལ་ངས་དུ་ན་བཀྲ་མི་ཤིས་པ་འདུག་དགོངས་  
ནས་ཐུག་གིས་སྤྱན་ཆབ་ཕྱིས་ནས་ཕྱོགས་བཅུདེ་ལྟ་ལ་ཐུག་བཅའ་ནས་སྟོན་ལམ་འདི་སྐད་  
འདེབས་སོ། བདག་གི་བྱ་འདི་ལམ་དུ་ཞུགས་པའི་ཆོ། ལོག་པར་མི་འགྱུར་མཐར་ལམ་  
ཐུན་པར་ཤོག། ལ་འུང་མང་པོ་སྤར་དུ་འགྲོད་པའི་ཆོ། ངལ་བའི་སྤྱག་བསུལ་ཅང་ཟད་  
མེད་པར་ཤོག། བདུད་རི་ཉ་ཤང་རི་ལ་སྟོད་པའི་ཆོ། ལྷ་མ་པར་ཀྱལ་བའི་ཁང་བཟང་ལྟ་  
བྱར་ཤོག། ཤིང་རྟོག་བསེལ་ས་ལ་སོགས་ཟེ་བའི་ཆོ། རོ་མཆོག་བརྒྱ་ཐུན་བདུད་རྩིར་  
འགྱུར་བ་ཤོག། ཁ་སྐོས་བདུང་བ་ཅུ་ལ་བྱེད་པའི་ཆོ། རྒྱན་ཆད་མེད་པ་ལོ་མའི་ཅུ་རྒྱན་ཤོག།  
ཤིང་ལོ་གོས་དང་ཤིང་གདན་བྱེད་པའི་ཆོ། བརྩ་ལི་དང་བདྲའི་གདན་དུ་ཤོག། གཅན་  
གཟན་གདུག་པའི་ངར་སྐད་འདོན་པའི་ཆོ། ཐེག་ཆེན་ཆོས་ཀྱི་སྤྱ་དུ་འགྱུར་བར་ཤོག།  
མི་མེད་འཛིགས་པའི་རི་ལ་སྟོད་པའི་ཆོ། མངས་ཀྱས་རྩིས་ཀྱིས་སྟོ་བོགས་མཇེད་  
བར་ཤོག། །།

(c) དེ་ནས་ལབ་ཡུམ་གཉིས་པོ་ཡང་བྱོན་པས། འོད་འདུམ་རྒྱུང་གི་དཀྱིལ་འཁོར་  
བྱ་བ་དེར་ཐེབས་སོ། དེར་བུས་ཟེ་ལོང་བ་གཅིག་ཅུང་མ་གཅིག་གིས་ཁྲིད་དེ་ཡོངས་ནས། ཀྱལ་  
བྱ་ལ་བུས་ཟེས་ཐུག་འཆལ་ཐལ་སོ་སྤར་དེ་འདི་སྐད་ཅེས་ཞུ་བ། ཀྱལ་བྱ་ཆེན་པོ་ལགས།

ཕྱིན་གྱི་སྤྱན་དེ་བདག་ལ་གནང་བ་ཞུ་ཞེས་ཞུས་པས། རྒྱལ་བྱ་གིན་དུ་མཆིས་ཏེ་ས་དེ་ཁར་  
སྤྱིལ་ཀྱང་མཛད་དེ། ད་ནི་སྤྱན་པའི་མཐའ་ཡང་ཇོགས་པར་བྱ་དགོས་དགོངས་ནས་འདི་སྐད་  
ཅེས་གསུངས་སོ།

ཡིད་འོང་རབ་མཛེས་མན་རྟེ་བཟང་མོ་ལགས།	
དགའ་བའི་དཔལ་མོ་བདག་ལ་ཚུར་གསན་དང་།	
བདག་གི་སྤྱན་པའི་མཐའ་ཡང་ཇོགས་པར་བྱེད།	
བདག་ལ་བྱག་ཞེན་གདན་ནས་མ་བྱེད་ཅིག།	
ཇི་སྤྱད་འཁོར་བ་ཐོག་མཐའ་མེད་པ་ནས།	
ལུས་འདི་ཇི་ཙམ་ཞིག་ནི་སྤང་བྱང་ཀྱང་།	
དོན་མེད་ལས་སྤུ་སོང་བའི་ངང་ལ་ལས།	
ད་ལན་དོན་ཆེན་སྟོང་པོ་ལེན་པར་བྱ།	

ཞེས་གསུངས་ནས། དུག་གཡས་པས་རབ་དུ་རྩ་བའི་གྱི་བཟངས་ནས། གཡོན་པས་སྤྱན་  
གྱི་ཕྲགས་པ་གསལ་དེ། གྱི་བཙུགས་པས་ཁྲག་འཆིལ་གྱི་བྱང་ངོ། དེར་མན་རྟེ་བཟང་མོ་  
བྱང་ན་གྱིས་སྐད་ཆེན་བོ་བཏོན་དེ། སེམས་ཀྱིས་མ་བཟོད་པ་བྱག་ལ་འཆང་ནས་བྱས་པས།  
རྒྱལ་བྱས་གསུངས་པ།

བཟང་མོ་བྱེད་ནི་དེ་ལྟར་མ་བྱེད་ཅིག།	
དེ་ལྟར་བྱས་ན་བདག་ལ་ཉེ་བ་མིན།	
འོ་སྐལ་པ་མ་གཉིས་ཀྱང་འཕྲད་མི་འགྱུར།	
བདག་གི་སྤྱན་པའི་བར་ཆད་མ་བྱེད་ཅིག།	

ཅེས་གསུངས་སོ།

## TRANSLATION FROM TAMIL INTO ENGLISH

Paper-Setters— { RAO BAHADUR L. K. ANANTHAKRISHNA Aiyer,  
B A., L.T.  
MAYAMAHOPADHYAY VEDANTAVISARAD ANANTA-  
KRISHNA SASTRI

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following passages :—

(a) மதுரையில் மூன்று திருடர்களிருந்தார்கள். மூவரும் 20  
அதிக துஷ்டர்கள். கொஞ்சமும் கருணையில்லாதவர்கள். அவர்  
களுக்கு ஒருவரிடத்திலாவது நம்பிக்கை கிடையாது. பகலில்  
குடிப்பதும் இரவில் திருடுவதும் தான் அவர்களது தொழில். ஒரு  
நாள் அவர்கள் ஸமீபத்தில் ஒரு கிராமத்தில் ஒரு பிறபுவின் வீட்டிலு  
கன்னம் வைத்து துழைந்தார்கள். அங்கு ஏராளமான பொரு  
ளிருந்தது. வேண்டியவற்றை வாரி யெடுத்துக் கொண்டு ஒரு  
பெருங்காட்டில் புகுந்து விட்டார்கள்.

(b) ஒரு குடியானவன் காட்டுக்குப் போனான். அங்கே எரிந்த 20  
து கொண்டிருந்த ஒரு புதரில் ஒரு பாம்பு அகப்பட்டுத் தப்ப வழி  
யில்லாமல் மிகவும் வருந்திக் கொண்டிருந்தது அது குடியானவ  
னைப் பார்த்து, ஐயா! என்னைக் காப்பாற்றும்! நானிறந்து போகி  
றேன், என்று கூறிற்று. அவன் “பாம்பே, உன்னை நம்பக் கூடாது.  
நீ துஷ்ட பிராணி; உன்னைக் காப்பாற்றினால் என்னையே கடிக்க  
வருவாய்” என்றான். பாம்பு “ஐயா! நான் தங்களுக்கு தீமை  
செய்யேன். நிச்சயமாயும் நம்பும். நானதிக ஆபத்திலிருக்கிறேன்”  
என்று வேண்டிக் கொண்டது.

(c) ஒரு துருக்கனிடம் அறிவுள்ள ஒரு நாயிருந்தது. அவன் 20  
அதைத் தன் குழந்தையைப் போல் வளர்த்துவந்தான். அவனுக்கு  
ஒரு ஸமயம் பணம் வேண்டி வந்தமையால் ஒரு வந்தகனிடம்  
அதை நடுவதை 100 ரூபாய்ப் பெற்றுக் கொண்டு நாய்க்குமதை  
தெரியப்படுத்திப் போனான். சில நாள் மிழித்து அந்த நாய் சந்தோஷத்  
தோடு துருக்கன் வீட்டுக்கு வந்தது. இது வந்தகனை மோசம் பண்  
ணி வந்து விட்டது என்று சினங்கொண்டு அதை ஒரு தடியினாலடித்  
தான். அந்த அடிதலையில் பட்டு அந்த நாயிறந்தது.

TRANSLATION FROM TELUGU INTO ENGLISH

*Paper-Setter—Mr. B. RAMCHANDRA RAU, M.A.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following passages into idiomatic English :

(a) సాహసమునందు స్త్రీని మించినవా రెవరును నుండరు. 20  
అజ్ఞానమై, మూఢాచార ప్రబోధితమై, హిందూ కాంతలు నూతననద్వి  
షయములందు ముందడుగిడుట కోపక, మీరు మిక్కిలి భర్తల నట్టి విషయ  
ములనుండి మరలింపఁ జూతురని లోకులెంచెదరుగాని, వారియభిప్రాయ  
మంతగా నరియైనదిగాదు. కన్నులుమూసికొని త్రాగుమని పాల  
పాత్రయిచ్చినను, ఎవరు సందేహింపకుదురు? ఒక కార్యము,  
మంచినదియును, బవిత్తమైనదనియును, విధ్యుక్తమైనదనియును, హిందూ  
మానిసులు మనసారగ్రహించిరేని, యింకనట్టి సత్యార్థము నెఱవేఱి  
నదే, ఆ వేసవిదినములు గడచిపోయి, యిప్పుడు వర్షాకాల మాసన్న  
మయ్యెను. ఒకనాటిరాత్రి శారద, చిరునగళుతో సాంపెనలారు తన  
చెక్కుటద్దములు దీపపుకాంతిచే మఱింత మెఱయుచుండగా, శయ్యమీద  
నవుడె మేను చేర్చిన పతిమీదఁ బూవువలెఁ గోమలమగు తన హస్తము  
నుంచి, “ఏమీ! అప్పుడె నిదురింపవలయునా? మంచినంగతులేమైన మీ  
భృత్యురాలికిఁ జెప్పరా?” యని మెల్లఁగననెను.

(b) ఆంధ్రదేశమున నొక గ్రామమున నర్పపురివారను నింటివేర 20  
గల బ్రాహ్మణకుటుంబ మొకటి గలదు. ఇస్కూటుసంవత్సరములకుఁ  
బూరవ్వును, నర్పపురివారి పూర్వకులలో నొక స్త్రీగర్భమున నాగుఁబాము

పుట్టెను. దానికి నాగరాజును పేరు పెట్టి, ఆయిల్లాలు నహజానురాగ ముతో దానిని బాలుబోసి పెంచెను. ఆమె గర్భముననే జనించిన తక్కిన పిల్లలతో నీచిలువకందు కలసి మెలసి యాడుకొనుచుండును. దినదినాభివృద్ధిగాంచుచున్న యాపాముజననిపోయపాలతోఁ దనివిఁ జెందక, తన జాతికి నైసర్గికమగు మాంసాహారమునకై తిరుగుచు, కృష్ణలు మొదలగు చిన్నజంతువులను వేఁటాడుచు వచ్చెను. అంత కంతకుఁ పెద్దదియై యాపాము, తన మానవ సోదరులతో నెల్లప్పుడు నిఁక గదిసియుండుట కర్తవ్యముగాదని గ్రహించి, నిర్జనప్ర దేశముకంటి చూచు కొనఁ బ్రయత్నించెను. కాని, కన్న తల్లిని, తండ్రిని, నిజసోదరులను విడిచి పోవుట దానికి దుస్సహముగఁ దోచి, ఆ యింటనే యెత్తగు కప్పదగ్గఱను, వెలిసెలలోను, అటకమీదను తన నివాస మేర్పఱుచుకొనెను.

(c) పడవలోనుండువారు, ఏనిమిషమున నావ మునిగిపోవునో 20  
యని భయముచే వణకుచుండిరి. కొందఱు దైవముమీఁద భారమువేసి, తాతాగ్రలికమగు వైరాగ్యమును బానియుండిరి. మఱి కొందరు, నదీ దేవతను శమింపఁజేయుటకుఁ దమయొద్దనున్న ఫలాదులను నైవేద్యములుగ నమర్పించిరి. భీతిచేఁ గళవళపడుచుండు నాబాటసారుల మనఁసుల నివ్వ దింకొక కష్టమాకర్షించెను. ఆనావలో నెలలు నిండిన యొక కాంత కూర్చుండి యుండెను. భయోద్రేకముచేతనో, సరియైన సమయ మానన్నమగుటచేతనో, ఆమె కిప్పుడు సుప్పలారంభించెను ! అన్ని సమపాయములునుండు గృహలోనే మిక్కిలి కష్టముగఁదోచు ప్రసవసమయ మిప్పుడే యాభారములును, ఏయవకరణములును లేని నదీమధ్యమునఁ గొట్టుకొనిపోవు నావలో మిక్కిలి కష్టముగఁ గానఁబడెననిన నేమియాశ్చర్యము ? కాని, యెట్టి యాపదలో నున్నను, నమ యోచితమగు కార్యము నాలోచించుట మనుష్యునికి నహజము. వేగమే, పడవలో మధ్యగా నుక తెరవేయఁబడెను. అనుభవముగల స్త్రీలు కొందఱు తెరలోఁ జేరిరి.

## TRANSLATION FROM MALAYALAM INTO ENGLISH

*Paper-Setter*—RAO BAHADUR L. K. ANANTHAKRISHNA AIYER,  
B.A., L.T.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the Malayalam passages :—

(a) കൃഷ്ണപാട്ടിന്റെ കർതാവ് ചെറുശ്ശേരി നമ്പൂതിരി 20  
യാണെന്നാണു കെൾപി. ഈ കവി കൊല്ലം വക്തം  
ഏഴാം ശതാബ്ദത്തിന്റെ ഒടുവിൽ ഉത്തരകേരളം രാജാ  
വായ ഉദയവർമ്മന്റെ ആശ്രിതനായിരുന്നു. നമ്പൂ  
തിരിമാരെ ഇല്ലപ്പേർ കൂട്ടി വിളിക്കുന്നത സാധാരണ  
യാകുന്നു. അദ്ദേഹം ജനിച്ചത വടകരയായിരുന്നു.  
കൃഷ്ണ ഗാഥയുടെ നിർമ്മാണത്തെ പറ്റി വേറൊരു കഥ  
യുണ്ട്. ഒരു ദിവസം രാജാവും ചെറുശ്ശേരിയും ചതുരംഗം  
പെച്ചു കൊണ്ടിരിക്കുകയായിരുന്നു.

(b) ഇതിന്റെ കർതാവായ ഇരയിമ്മൻ നമ്പൂതിരി 20  
യുടെ രാജ്യം തിരുവനന്തപുരമായിരുന്നു. ചെറുപ്പത്തിൽ  
തന്നെ സംസ്കൃതത്തിലും മലയാളത്തിലും നിപുണനാ  
യിരുന്നു. അക്കാലത്തു തന്നെ കവിതവാസനയും  
ഉണ്ടായിരുന്നു. മണിപ്രവാളത്തിന്റെ കർതാവ്  
കുഞ്ചൻ നമ്പ്യാരായിരുന്നു.



(c) ಅತ್ತೇರಂ ಜಿಗಿತ್ತಿತ ಕೊತ್ತಿಸುಂಘಾನಾಂತಿ 20  
 ಲಕಣಿಯ ತಿರವಿಲ್ಲಾಮಲಯತ್ತಿತ ಕಿತ್ತಿಕ್ಕಿಕ್ಕಿರಿತ್ತಿಮಂ  
 ಲತ್ತಾಯಿತ್ತು. ಅಕ್ಕರೇಶಂ ಇತ್ತವನ ವಯಸ್ಸು  
 ತನ್ನ ಸ್ವಂತಗಾತ್ರಿಯ ತನ್ನ ವಯಸ್ಸಾಯಿತ್ತು.  
 ಅತ್ತಿನ್ ಶೇಷಂ ಅಪಲಪ್ಪಳ ರಾಜಾವಿನ ಅತ್ತಿತ್ತಿತ್ತಿ  
 ತ್ತು. ಅಕ್ಕರೇಶಂ 65 ವಯಸ್ಸಾಯಿತ್ತಿ ತನ್ನ  
 ಸ್ವಂತಗಾತ್ರಿಯ ಮಕ್ಕಿ ಅತ್ತಿ ವಯಸ್ಸು ತನ್ನ  
 ಯಾತ ಕಾಲಗಾತ್ರಿಯ ಪ್ರಾಪ್ತಿಯು ತ್ತು.

# TRANSLATION FROM KANARESE INTO ENGLISH

*Paper-Setter*—MR. P. APPAMI RAO, B.Sc.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

Translate into idiomatic English any two of the following 40  
 passages :—

(a) ನಮ್ಮ ಕರ್ನಾಟಕ ಸಾಹಿತ್ಯ ಪರಿಷತ್ತು ಒಂಬತ್ತಾಗಿ ಈಗ ಪರಿ  
 ನಾಲ್ಕು ವರ್ಷಗಳ ಕಾಲವೆ. ಕನ್ನಡದ ಸ್ಥಿತಿ ಮತ್ತು ಈ ಪರಿಷತ್ತಿನ ವರ್ಷಗಳಲ್ಲಿ  
 ಬಹಳ ಪ್ರಯತ್ನ ಮಾಡಿದೆ. ಪರಿಷತ್ತು ಮಾಡಿರುವ ಕಾರ್ಯವನ್ನು ನಾನು  
 ಈ ಸಂದರ್ಭದಲ್ಲಿ ಪರಿಶೀಲಿಸುವುದಕ್ಕೆ ತೊಡಗುವುದಿಲ್ಲ. ಈಗ ನಾಲ್ಕು ವರು  
 ವರ್ಷ ಹಿಂದೆ ಪ್ರೀಮರ್ಸ್ ಜಿನಿಗಲ್ ಹಾನುಗಾಯನು ತನ್ನ ಭಾವನೆಯಲ್ಲಿ  
 ಪರಿಷತ್ತು ಅದುವರಿಗೆ ಮಾಡಿದ ಕೆಲಸವನ್ನೆಲ್ಲಾ ವಿವರಿಸಿ ಅದು ತೃಪ್ತಿ  
 ಕರನಾಗಿ ನಡೆದಿದೆ ಎಂದು ತಿಳಿಸಿದರು. ಅದರು ತನ್ನ ನಿಜವಾಗಿಯೆಂದು  
 ಮಾಡಿದ ಕೆಲಸವನ್ನು ನಾನು ಮತ್ತೆ ಮಾಡುವ ಅವಕಾಶವಿಲ್ಲ. ಅಲ್ಲದೆ,  
 ಪರಿಷತ್ತು ಈ ಕೆಲಸವನ್ನು ಮಾಡಿತು, ಆ ಕೆಲಸವನ್ನು ಮಾಡಲಿಲ್ಲ ಎಂದು  
 ನಾವು ಯಾರೂ ಯಾರನ್ನೂ ಹೇಳುವಂತಿಲ್ಲ. ನಾವು ಮಾಡಿದುದನ್ನು  
 ಪರಿಷತ್ತು ಮಾಡುತ್ತದೆ, ನಾವು ಮಾಡದೆ ಇದ್ದುದನ್ನು ಪರಿಷತ್ತು ಮಾಡಲಾ

ರನು. ಪರಿಷತ್ತೆ ನಾವು ಮಾಡಿದುದು. ಒಬ್ಬನಲ್ಲಿ ಪರಿಷತ್ತು ಕನ್ನಡಕ್ಕೆ ಈಗ ಮಾಡಿರುವುದಕ್ಕಿಂತ ಹೆಚ್ಚಾದ ಕೆಲಸವನ್ನು ಮಾಡದೆ ಇರುವುದಕ್ಕೆ ವಿದ್ಯಾವಂತರಾದ ಕನ್ನಡಿಗರ ಔದಾಸೀನ್ಯವೇ ಮುಖ್ಯ ಕಾರಣ. ಈ ವಿಷಯವನ್ನು ಹೇಳಲು ನನಗೆ ವ್ಯಸನವಾಗುತ್ತದೆ. ಮಹನೀಯರೆ, ಕನ್ನಡ ನಾಡಿನ ಇಷ್ಟು ಸಾವಿರ ಮಂದಿ ಸುಶಿಕ್ಷಿತರಾದವರಲ್ಲಿ ಹತ್ತರಲ್ಲಿ ಒಂದು ಸಂಖ್ಯೆಯಷ್ಟು ಜನ ಪರಿಷತ್ತಿಗೆ ಸದಸ್ಯರಾಗಿಲ್ಲವೇಕೆ? ಪರಿಷತ್ತು ಚೆನ್ನಾಗಿ ಕೆಲಸ ಮಾಡಲಿ, ಆ ಮೇಲೆ ನಾನು ಬಂದು ಅದಕ್ಕೆ ಸದಸ್ಯನಾಗುತ್ತೇನೆ — ಎಂದು ಅನೇಕರು ಹೇಳುವರು. ಮೈ ಚೆನ್ನಾಗಿ ಕೆಲಸ ಮಾಡಲಿ ಆ ಮೇಲೆ ನಾನು ಅದಕ್ಕೆ ನೆರವಾಗುತ್ತೇನೆ—ಎಂದು ಹೇಳಿ ಕಯ್ಯಾ ಕಣ್ಣೋ ಕೆಲಸ ಮಾಡದೆ ನಿಂತರೆ ಅದನ್ನು ಎನೆಂದು ವರ್ಣಿಸ ಬಹುದು? ಪರಿಷತ್ತು ಮಾಡ ಬಹುದಾದ ಕೆಲಸ ನೂರು ಇದೆ. ಜನರು ಬಂದು ಸದಸ್ಯರಾಗಿ ಹಣವನ್ನು ಕೊಟ್ಟು ಇತರ ಸಹಾಯ ಮಾಡಿ ಅದಕ್ಕಾಗಿ ದುಡಿದರೆ ಆ ಕೆಲಸ ನಡೆಯ ಬಹುದು. ಇಲ್ಲದಿದ್ದರೆ ಅದು ನಡೆಯುವ ಸಂಭವವೇ ಇಲ್ಲ.

(b) ಕಾಂಗ್ರೆಸ್ಸಿನವರು ಸ್ವದೇಶ, ಸ್ವದೇಶ, ಎಂಬ ಗಲಭೆಯನ್ನು ಎಬ್ಬಿಸಿದ್ದರಿಂದ ನಮ್ಮ ಜನರ ಕಣ್ಣುಗಳು ತೆರೆದಿವೆ. ಹಳೇ ಜಾತ್ರೆಗಳೇನೋ ಉದ್ದೇಶ ಹೀನವಾಗಿ ಸಾಗುತ್ತಿವೆ. ಆದರೆ ಸ್ವದೇಶಿ ವಸ್ತುಗಳ ಪ್ರದರ್ಶನವೆಂಬ ಹೊಸ ಹೆಸರಿನ ಜಾತ್ರೆಗಳನ್ನು (melas) ಬೇರೆ ಬೇರೆ ಪಟ್ಟಣಗಳಲ್ಲಿ ಕೂಡಿಸುತ್ತೇವೆ. ನಮ್ಮ ದೇಶಗಳಲ್ಲಿಯೇ ತಯಾರಿಸಿದ ವಸ್ತುಗಳನ್ನು ಮಾತ್ರ ಈ ಪ್ರದರ್ಶನಗಳಲ್ಲಿ ನಾವು ಬರಗೊಡುತ್ತೇವೆ. ನೂರು ವರ್ಷಗಳಿಂದ ವಿದೇಶಿ ವಸ್ತುಗಳನ್ನೇ ಉಪಯೋಗಿಸುತ್ತಾ ಬಂದದ್ದರಿಂದ ನಾವು ನಮ್ಮ ದೇಶದ ವಸ್ತುಗಳನ್ನು ಮರೆತಿರುವೆವು. ನಮ್ಮ ದೇಶದ ಉದ್ಯೋಗಗಳನ್ನು ಬೆಳೆಸಬೇಕಾದರೆ ನಾವೆಲ್ಲರೂ ಸ್ವದೇಶಿ ವಸ್ತುಗಳನ್ನೇ ಉಪಯೋಗಿಸ ಬೇಕಲ್ಲವೇ? ನಮ್ಮಲ್ಲಿ ಯಾವ ವಸ್ತುಗಳು ಮಾಡಲ್ಪಡುತ್ತವೆಂಬುದು ನಮಗೆ ಗೊತ್ತಾಗದಿದ್ದರೆ ಆ

ವಸ್ತುಗಳನ್ನು ಕೊಳ್ಳುವುದಾದರೂ ಹೇಗೆ? ಅದಕ್ಕಾಗಿ ಇಂಥ ಪ್ರದರ್ಶನಗಳಲ್ಲಿ ಎಲ್ಲಾ ಸ್ವದೇಶಿ ವಸ್ತುಗಳನ್ನು ಒತ್ತಟ್ಟಿಗೆ ಕೂಡಿಸಿ ಜನರೆದುರಿಗೆ ಹಾಕಬೇಕು. ಸ್ವದೇಶಿ ವಸ್ತುಗಳನ್ನು ಕೊಳ್ಳುವವರನ್ನೂ ವಸ್ತುಗಳನ್ನು ಮಾಡುವವರನ್ನೂ ಒಂದೇ ಸ್ಥಳದಲ್ಲಿ ಕೂಡಿಸುವ ಜಾತ್ರೆಗಳೇ ಪ್ರದರ್ಶನಗಳು. ಈ ಪ್ರದರ್ಶನಗಳು ನಮ್ಮ ದೇಶದಲ್ಲಿ ಎಂಥ ಸಾಮಾನ್ಯಗಳು ಹುಟ್ಟುತ್ತವೆ ಮತ್ತು ಎಂಥ ಸುಂದರವಾದ ಸಾಮಾನ್ಯಗಳು ಮಾಡಲ್ಪಡಬಲ್ಲವೆಂಬುದನ್ನೂ ವ್ಯಕ್ತ ಹೊಳಿಸುತ್ತವೆ. ತಮ್ಮ ಪ್ರಾಂತ್ಯಗಳಲ್ಲಿಯೇ ಹುಟ್ಟುಹ ಸಾಮಾನ್ಯಗಳನ್ನು ಅರಿತುಕೊಳ್ಳಲಿಕ್ಕೆ ನಮ್ಮ ಜನರಿಗೆ ಇದೊಂದು ಸುಸಂಧಿಯೇ ಸರಿ. ನಾವು ಇಂಥಾ ವಸ್ತುಗಳನ್ನು ತಯಾರಿಸಬಲ್ಲೆವೆಂದು ಜಾಹಿರ ಮಾಡಿ ಹೇಳುವದಕ್ಕೆ ಕೈಗಾರಿಕೆಯವರಿಗಿದೊಂದು ಸುಸಂಧಿಯು.

ನಮ್ಮ ದೇಶವು ಒಕ್ಕಲಿಗರ ದೇಶವು. ಒಕ್ಕಲಿಗರು ಮಳೆಗಾಲದಲ್ಲಿ ಮಾತ್ರ ಕೆಲಸದಲ್ಲಿ ತೊಡಗಿರುವರು (engaged). ರಾಶಿಯು ಮುಗಿದಂದಿ ನಿಂದ ಮತ್ತೆ ಮಳೆ ಬೀಳುವವರೆಗೆ ಅವರು ನಿರುದ್ಯೋಗಿಗಳಾಗಿರುವರು. ಈ ಕಾಲದಲ್ಲಿ ಒಕ್ಕಲಿಗರು ಶಕ್ಯವಿದ್ದ ಉದ್ಯೋಗಗಳನ್ನು ತಮ್ಮ ಮನೆಗಳಲ್ಲಿ ಮಾಡಬೇಕು.

(c) “ಮಹಮ್ಮದೀಯರ ಮತ ಧರ್ಮಗಳ ಸಾರವನ್ನು ಹಿಂದುಗಳೂ, ಸನಾತನ ಧರ್ಮದ ಸಾರವನ್ನು ಮಹಮ್ಮದೀಯರೂ ಅರಿತು” ಈರ್ವರೂ “ಸೌಹಾರ್ದ ಭಾವದಿಂದಿರುವುದಕ್ಕೆ ಸಾಧಕವಾಗುವಂತೆ” ಯೂ, ಈರ್ವರಲ್ಲೂ “ಅನೇಕರ ಹೃದಯಗಳು ವಿಣಾನಾದದಂತೆ ಶ್ರುತಿಗೊಂಡು ಸ್ನೇಹದ ಮಧುರ ತಾನಕ್ಕೆ” ಸಿದ್ಧವಾಗಲಿಂಡೂ, “ಪೈಗಂಬರ ಮಹಮ್ಮದನು ಮತಸ್ಥಾಪಕರಾದ ಮಹಾ ಪುರಷರಲ್ಲೊಬ್ಬನು” ಎಂದೂ, “ಅ ಮಹನೀಯನಲ್ಲಿ ಪೂಜ್ಯಭಾವನೆಯನ್ನಿಟ್ಟು” ಎರಚಿಸಿರುವ ಈ ಪ್ರಯತ್ನವು ಸುಪೂರ್ಣವಾಗಿ ಯಶಸ್ವಿಯಾಗಿದೆ.

[illegible]

## TRANSLATION FROM SINHALESE INTO ENGLISH

*Paper-Setter*—REV. P. SEELAXANDA.*Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*' Translate any *two* of the following passages into English :—

(a) ඉක්බිති ඒ ඒ දිසාවන්හි දිසාපතිවරුද රටේ 20  
මහත්වරු ආදී අවශ්‍ය නිලධාරීහුද මහනිලමේගේ  
ආනපරිද්දෙන් සංකඩගල නුවරට පැමිණියෝය.  
දිසාපතිවරු මහල්මඩු වේද අවශ්‍ය ජනයා මහල්මඩු  
වෙත් පිටතද රැස්කරවා මහනිලමේ පළමුකොට දිසා  
පති වරුන්ට කතාකොට “රජතුමන්ට රොගයක් වැළඳී  
නිතින්තෙය, එය සාධපනොවේයයි සිතිය හැකිය,  
එයින්ම රජතුමා සුවසීය එනම් ඒ පුවන රට නොව  
පැතිර යියකල රජකෙනෙක් නැත්නම් ඩියවුල් ඇති  
වෙත්ට පුලුවන, එමනිසා රජතුමා ජීවත්ව සිටියදීම  
රාජපය පාලනයට තිස්සෙක් තෝරා ගැනීම මෙහි  
රැස්ව සිටින තැනැත්තන්ට භාරයයි” කියේය.

එවිට එක්තර, දිසාපතිකෙනෙක් කරාකොට ඔටු  
ත්ත ගිම්කෙනෙක් තැනිබැවින් මේ සභාව විසින්  
තිස්සෙක් තෝරාගත යුතුය.

එසේද වුවත් රජබව ලබන්ට නිස්සා අසවලය යනවග අපට වඩා හොඳින් අඳිකාරම් වරුන්ට දැනෙත්තේ යයි කියෙය. එවිට මහතිලමේ තමා විසින් නියම කරගෙන සිටි තන්න සාමි කුමාරයාගේ සිරුර කියා ඩුග් ගැන වැසියන්ගේ කැමැත්ත කෙසේදැයි විචාලේය. එකල්හි එක් දිසාපති කෙනෙක් සෙස්සන් හා සමග සාකච්ඡාකරගෙන ඒ කුමරා තෝරාගන්ට දිසාපති වරුද කැමැත්තෙන් යයි කියෙය.

(b) රාජපයෙන් පහතරදමනු ලැබූ ශ්‍රී වික්‍රමරාජ 20 සිය රජ වූ 1816 ජනවාරිමස 24 වෙනිදින “කෝරන් පිළිස්” නම් නැවෙන් මදුරාසියට යවන ලද්දෙය. හෙතෙම නැව නගිත් ප්‍රථමයෙන් මොල්ලිගොඩ නලබ්බ දකින්ට සහුටු බව කියෙය. ඒ අඳිකාරම් රාජ්‍යට කැනිබ්බ දැන්වූ තල “මොල්ලිගොඩ මා දකින්ට නාමේ මගේ ගිනට වෙදනා දෙත්ට කණගාටුවෙන් යයි” කියෙය.

ඉන්පසු ඇහැළේපොළ නිලමේ කොළඹ සිටින බව දන්වන ලදව “ඇහැළේපොළ නිලමේ කොළඹට ආමේ මා බල සිතා බෙත්ටය, නමුත් ඉංග්‍රීසින් ඊට අවකාශදී නැත. ඉංග්‍රීසිහු. රථ මතුපා වගියක් නමුත් එවැනි සමහර හොඳ ගතින් ඇත්තෝයයි” කියෙය.

(c) දුටුගැමුණු කුමාරයා මලයරට වාසය කරණ 20 අකර කාවනකිසසරජ මළේය. හෙතෙම අවුරුදු සැට සතරක් මා ගම රාජ්‍යය කලබව කියා තිබේ. මේකා

ලෙස් දිගාමඩුල්ලේ වාසයකළ නිසසකුමාරයා පිය රජුරුවන් වලබව අසා වහාම මා ගමට ගොස් රජුගේ කඩොල් ඇතාද, වඩි බිසවද ගෙණ දිගාමඩුල්ලට නැවතත් ගියේය. ඇමානපයන් විසින් රජු මලබව දන්වන ලදුව දුටු ගැමුණු කුමාරයා මා ගමට පැමිණ රාජපද ප්‍රාප්ත විය. ඉක්බිති මැණියන් හා කඩොල් ඇතා එවන ලෙස ඉල්වා කිසස කුමාරයාට පතන් යැ විය. කිසස කුමාරයා ඩවුන් රතා එවූ බැවින් දෙබැ යන් අතර ප්‍රචයක් ආරම්භ විය. නිසසකුමාරයා ප්‍රබ යෙන් පරාජයවී පලා ගියේය.

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MATRICULATION EXAMINATION

TRANSLATION FROM BURMESE INTO ENGLISH

Paper-Setters— { MAUNG WE LIN.  
MAUNG BA, B.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate any two of the following passages into English :—

40

(a) ဥတ္တရပဉ္စာလရာဇ်ပြည်၌စူဠနိဗြဟ္မဒတ်မင်းသည်ထီးဆောင်းခင်း  
အပေါင်း ခြံရံလျက်မိမိလာပြည်ကိုသိမ်းယူခြင်းငှါမတတ်နိုင်သည်ဖြစ်၍  
အားယုတ်ခြင်းသို့ရောက်လေ၏။ ကေဂုဏ်အမတ်သည်လည်းကြွေးမုံပြင်  
၌မျက်နှာရိပ်ကိုကြည့်တိုင်းမိမိနဘူး၌ အမာရွှပ်ကိုမြင်လျှင် ။ ဤအမာရွှပ်  
သည်တပီးသောသူကြောင့်မဖြစ်။ သူကြွယ်သားမဟောသခါကြောင့်  
ဖြစ်၏။ သူကြွယ်သား သည်မင်း အမတ်ပရိသတ်တို့ အလယ်၌ ငါတို့  
အရှက် ကိစ္စ ဘိ၏။ ထိုသူကြွယ်သား ကိုအဘယ် အခါ၌ အဘယ်အ  
ကြောင်း ဖြင့်လက်စားခြေရအံ့နည်း ဟုပြင်းစွာအမျက်ထွက်၍နိုင်စက်အံ့  
သောအကြောင်းကိုသာအခါခပ်သိမ်းကြံလျက် ။ ထိုစစ်ရှုံးသည်မှတစ်  
ရောက်သောအခါတခုသောအကြောင်း ကိုကြံမိလေသည်မှာ။ ငါတို့အ  
ရှင်မင်းကြီးသွီး တော်ပဉ္စာလစဉ်မင်းသွီး သည်ယခုအရွယ်ရောက်ဦးစအ  
ချိန်လည်းဖြစ်သည်နှင့်နတ်သွီးကဲ့သို့ရှု၍မပြီးသောအဆင်းကိုဆောင်၏။  
ထိုမင်းသွီးဖြင့်ဝိဒေဟရာဇ်မင်းကိုဖြား ယောင်း၍ အစာဖြင့်မွမ်း မံသော  
သံမျှား ချိတ်ကိုမျှသည့်ငါး ကဲ့သို့မဟောသခါနှင့်တကွ ဝိဒေဟရာဇ်မင်း  
ကိုဘမ်းယူကွပ်မျက်ပြီးလျှင် ။ တရာသောထီး ဆောင်းမင်းအပေါင်းခြံရံ  
လျက် ငါတို့အရှင်မင်း ကြီး အားအောင်မင်္ဂလာကိုဆောင်စေအံ့ ဟုစိတ်  
ထဲအမြဲစွဲမှတ်ကြံစည်ပြီးသော်နန်းတော်သို့ဝင်လေ၏။



(b) ထိုမင်းသွီး နှစ်ယောက်တို့သည်ဤစန္ဒကူး နှစ်ရွှေပန်း ကုံးတို့ကို ငါတို့မလိမ်းမဆင်ပြီ။ မြတ်စွာဘုရားကိုသာပူဇော်အံ့ ဟုကြံပြီးသော်မည်းတော်မင်းကြီးအားအကြောင်းကိုလျှောက်တား၍။ ကောင်းပြီးပူဇော်ကြတော့ဟုမင်းကြီးဆိုလျှင်။ သွီးတော်အကြီးသည်စန္ဒကူးနံ့သာနှစ်ကိုအထုံအမုန့်ပြုပြီး မှရွှေပန်းကပ်ပေါ်၌ အပြည့်ထည့်၍။ သွီးတော်အငယ်လည်း ရွှေပန်းကုံးကိုရင်လွှမ်း တန်ဆာပြုပြီး မှရွှေပန်းကပ်ပေါ်၌ တင်၍ဆောင်ယူစေလျက်မင်းသွီး နှစ်ယောက်တို့ မိဂဒါဝန်ဥယျာဉ်သို့သွားကြသဖြင့်။ မင်းသွီးကြီးသည်အချို့သောနံ့သာမုန့်ဖြင့်ဂန္ဓကုဋ်တိုက်ကိုကြံဖြန့်ထုံစေပြီးသော်ဤသို့ဆုတောင်း၏။ ဘုန်းတော်ကြီး လှသောအရှင်ဘုရား အား ဤသို့သောနံ့သာ အမွှေးအထုံဖြင့် အကျွန်ုပ်ပူဇော်ရသောကောင်း မှုကြောင့် နောင်လာလတ်သောကာလ၌ အရှင်ဘုရားကဲ့သို့လူသုံး ပါးတို့၏ ဆရာဖြစ် သောမြတ် စွာဘုရား၏ မယ်တော်ဖြစ်ရပါလို၏ ဟုဆုတောင်း၏။ မင်းသွီးအငယ်သည်ကား ရင်လွှမ်းတန်ဆာဖြင့်မြတ်စွာဘုရားအားပူဇော်၍။ ဘုန်းတော်ကြီးလှသောမြတ်စွာဘုရားအား ဤရင်လွှမ်းတန်ဆာဖြင့် ပူဇော်ရသောကောင်းမှုကြောင့် အကျွန်ုပ်အကြင်မျှလောက်သောကာလပတ်လုံးနိဗ္ဗာန်ကိုမရသေး။ ထိုနိဗ္ဗာန်ကိုမရသေးသမျှကာလပတ်လုံးအကျွန်ုပ်၏ကိုယ်၌ဤရင်လွှမ်းတန်ဆာသည် မပြတ်ပါစေသတည်းဟုဆုတောင်း၏။

(c) ဘုရားလောင်း မင်းကြီးသည်ဟိမဝန္တာသို့လွှားအံ့ ဟုနန်းတော်အထက်ဘုံဆင့်မှဆင်း သက်မည် အပြုတွင်ရှေ့ရှုတက် လာလတ်သောမိမုရား ခုနစ်ရာတို့သည်ရဟန်း အသွင်ဖြင့်ဆင်းသက်အံ့ ဟုပြုသောဘုရားလောင်းကိုရှောင်းတခင်မြင်လေသော်။ အသွင်ခြားသည်ဖြစ်၍မင်းကြီးဟုတယောက်သောမိမုရား မျှအမှတ်မရှိဘဲ အရှင်ပစ္စေကဗုဒ္ဓါအရှင်မြတ်သည်ငါတို့အရှင်မင်းကြီး အားအဆုံးအမပေး၍ ယခုဆင်းသက်တော်မူလာသည်ထင်၏ ဟုအမှတ်ရှိကြသဖြင့်လမ်း လွဲကာသင့်ရာကထိုင်လျက်ရှိခိုး၍နေကြကုန်၏။ ဘုရားလောင်းမင်းကြီးသည်လည်းရဟန်းအသွင်ဖြင့်ငြိမ်သက် တည်ကြည်စွာနန်းတော်အထက်ဘုံဆင့်မှဆင်းသက်တော်

မူလေ၏။ မိဖုရားခုနစ်ရာတို့သည်လည်းအထက်ဘုံဆင့်သို့တက်၍ဘုရားလောင်းကိုကြည့်ရှုကြလေသော်စက်တော်မူရာရွှေသလွန်ပေ၍ဝတ်ဆင်တော်မူသည့်ဝတ် လဲတော်တန်ဆာ အဆောင် အရွက်တို့ကိုစုပုံလျက်ထိုဝတ်လဲတော်၏ အပေ၍ခွေလျက်တင်ထား ခဲ့သောဝိတုန်း တောင် အဆင်းကဲ့သို့သောဆံတော်တို့ကိုမြင်ကြလတ်လျှင် ။ ရဟန်းအသွင်ဖြင့်ယခုတွင်ဆင်းသက်တော်မူသောသခင်ကိုငါတို့ကား အရှင်ပစ္စေကဗုဒ္ဓါဟု အမှတ်မှား ဘိ၏။ အရှင်ပစ္စေကဗုဒ္ဓါမဟုတ် ။ ငါတို့အရှင် ဖြစ်ခဲ့၏တကား ။ ယခုသွား၍တောင်းပန်ကြကုန်အံ့ဟုအထက်ပြာသာဒ်ဘုံဆင့်မှဆင်းသက်ခဲ့ကြပြီးသော်ဘုရားလောင်း အရှေ့စမုတ်ဝသိုရောက်တော်မူစည်မှီကြလေ၏။

TRANSLATION FROM FRENCH INTO ENGLISH

Paper-Setters—{REV. FR. E. POPULAIRE, S.J.  
MR. NAGENDRANATH CHANDRA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :—

(a) Benjamin était bien fier, car son père lui avait permis de monter 20  
avec lui dans sa voiture, trainée par un petit cheval blanc.

La voiture allait vite, et Benjamin, enchanté, criait au cheval : Hue ! Hue !

Tout d'un coup son père arrêta la voiture. Il venait de voir sur la route un pauvre homme qui revenait de sa journée et qui avait l'air bien las.

— Montez près de nous mon brave homme, dit-il. Les jambes du cheval vous porteront mieux que les vôtres.

Le journalier monta dans la voiture, et comme il n'y avait pas de place pour trois, Benjamin s'assit sur les genoux de son père.

Le cheval reprit le trot, et Benjamin, heureux d'être sur les genoux de son père, réfléchissait tout bas ; il se disait : ' Mon père est bon, il aime à obliger tout le monde, il cherche partout le bien qu'il peut faire.'

(b) Le grand-père de Justin marche tout courbé, comme s'il se 20  
penchait sans cesse vers l'enfant pour l'embrasser.

Ses cheveux sont tout blancs, comme la neige. Justin l'aime et le respecte, et il est bien content lorsque, au coin du feu, son grand-père le prend sur ses genoux pour lui raconter quelque ancienne histoire.

Le dimanche, s'il fait beau temps, Justin sort avec lui. Comme le grand-père n'y voit plus très bien, il s'appuie sur le bras du petit garçon, et Justin l'avertit quand il y a un mauvais pas. Il l'aide à monter ou à descendre les marches de la maison.

' Oh ! cet enfant, dit le grand-père à ses vieux amis sur la place du village, cet enfant, c'est mon bâton de vieillesse ! '

Et Justin rougit, tout fier de cet éloge et il se dit qu'il ne fait que son devoir en aimant le père de son père.

(c) Les parents de Marcelin lui avaient dit bien des fois : Ne joue pas avec le feu. 20

Un jour qu'il y avait de grands tonneaux à la porte du marchand de vin, Marcelin se glissa par derrière pour mieux se cacher.

Puis, entre deux tonneaux, il alluma un petit feu avec des bouts de bois.

Tout d'un coup, il poussa des cris affreux : une grande flamme bleue l'entourait et le brûlait horriblement. Il se sauva ; mais derrière lui retentirent des détonations : les tonneaux renfermaient de l'alcool, l'alcool avait pris feu et les faisait éclater à grand bruit.

Un ruisseau de feu courait derrière Marcelin, qu'on eut grand'peine à sauver et qui resta longtemps au lit.

Plus tard, lorsque Marcelin put retourner à l'école, ses petits camarades virent qu'il avait la joue droite, l'œil et l'oreille brûlés, ce qui le rendait fort laid.

## TRANSLATION FROM PORTUGUESE INTO ENGLISH

*Paper-Setter*—DR. P. D. BRAGANÇA CUNHA

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

Translate into English any two of the following passages :—

40

(a) A diferença entre os homens consiste pois, em grande parte, na intelligencia das suas observações. Um proverbio dos russos diz que 'o máo observador é capaz de atravessar uma floresta sem nella descobrir lenha para o fogo'.—O sabio, diz Salomão, tem os seus olhos na frente ; mas o insano caminha nas trévas.—' Senhor, disse um dia Johnson a um pedante recémchegado da Italia : ha pessoas que acharão mais occasiões de se instruirem indo de Londres a Hampstead, do que outras percorrendo toda a Europa.' Com effeito, o espirito vã, e não menos lucidamente do que os olhos, onde o observador desattento nada nota, o homem dotado de vista intelligente penetra de prestes os phenomenos que se lhe deparam ; observa attentamente as suas diversidades, compara-os uns com os outros, e chega assim a descobrir a causa que os determina.

(b) Sacco vasio, diz o proverbio, não se tem em pé ; e o mesmo acontece com o homem envidado. O credito faz de tudo uma tentação e é tambem muito difficil vêr-se um homem envidado que seja veridico : tal é a razão por que diz o proverbio, que a mentira viaja de garupa com as dividas. O devedor vê-se com effeito obrigado a buscar desculpas, e talvez tambem a inventar mentiras para adiar o pagamento do seu debito.

(c) Imael buscara, entretanto, a solidão do deserto. Caminhou duas horas sobre a areira em saber onde ia. As trevas da noite eram apenas cortadas pelas estrelas innumeráveis que tremeluziam no céu, e o desditoso, como um precito, ia seguindo ao acaso, com a alma alanceada pela mais terrível das angústias.

O seus primeiros pensamentos tiveram Helena por objecto—tôdo o encanto, tôda a graça que fóra de dia o seu enlêvo e de noite o seu sonho não pertencia a êle, mas a outro. . . .

## TRANSLATION FROM ARMENIAN INTO ENGLISH

*Paper-Setter*—MR. S. MIHIGIAN.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English *two* out of the following three passages :— 40

(a) Անճախ փառքն ու պատկը՝ Վկարագիրն է : Վա մի մարդու ազնւագոյն սեպհակաւթիւնն է : Վա աւելի աղղեցու թիւն է ի գործ գնում քան թէ հարստութիւն և տպահովում է ամբողջ պատիւը առանց համբաւի նախանձին : Վկարագիրը մարդկային քնաւորութիւնն է իր ամենալաւ ձեւին մէջ : Վա բարոյական կարգկանոնն է մարմնացած տնհատին մէջ : Վկարագրի տէր մարդիկ ոչ միայն ընկերութեան խիղճն են, ալլ նաեւ մի լաւ կառավարւած երկրի թաքուն ուժը : Ղզգերի ուժը, ճարտարաբնասն ու քաղաքակրթութիւնը կախեալ է անհատական նկարագրից :

(b) Առակածի տեղիք չի մնում ուշադիր զննողի մտքում, այն մէկ պատճառը, թէ ինչպէ՞ս մեր այնքան խոստմնալից երիտասարդները վաղաժամ գերեզմանն են իջնում որովհետեւ նրանք աշխատում են չափից աւելին անել մի կարճ ժամանակում զանցառելով մարդանբը միանգամայն : Ղու

այժմ դրա անհրաժեշտութիւնը չես զգում: Ս'ենք դեղ չենք առնում մինչեւ որ հարկը չստիպէ մեզ: Ս'արզանքը ուսանողի մշտակայ դեղն է: Վու պէտք է այն բազմութեան վկայութիւնն առնես, որ այն ճամբիցն է գնացել, որի վրայ դու կանգնել ես այժմ: Վրանք քեզ պիտի ասեն, թէ քո ըմբռանքին չէ թողած մարզանքը անել կամ չանել, դու պէտք է որ մարզան անես, այլապէս քո բոլոր յոյսերն և քո բոլոր ակնկալութիւնները կորսուած են:

(c) Որքան պայծառ աչքերը աղօտանում են, որքան փափուկ այտերը տոգունում են, որքան սիրուն կերպարանքները խամրում ու գերեզման են իջնում, և ոչ ոք կարող է տալ պատճառը այդ դառն յուսախաբութեան: Խնչպէս որ աղանձինի թեւերը իր կողքին պիտի փակէ, ծածկէ և թաքցնէ նետը, որ իր սրտին է թափանցել, այսպէս է կնոջ բնաւորութիւնը—թաքցնել աշխարհից վիրաւորած սիրոյ տառապանքը: Չոր վիշտը արթում է իր արիւնը մինչեւ որ նրա ուժաթափ կազմուածքը տեղի տայ արտաքին ամենաթեթեւ չարիքին: Ս'ի քիչ վերջ փնտրի նրան և դու կը տեսնես որ բարեկամութիւնը ողբում է իր անժաւմանակ գերեզմանին վրայ:

## FIRST PAPER.—PART B

### ESSAYS, GRAMMAR AND COMPOSITION

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Develop one of the following groups of notes into an essay on the 15  
topic indicated:—

(a) 'Sweet are the uses of adversity': it brings out our hidden strength—humbles our pride, and teaches us to feel for others—turns our thoughts to God—not all men, however, can profit by their adversity—illustrations.

(b) Domestic animals: the principal domestic animals of this country—the services rendered to man by any four of them—the art of tending them—how they respond to man's love and care—illustrations.

2. Write a descriptive sketch of any *one* of the following :— 15  
 (a) A wedding which you have attended.  
 (b) A model village or town.  
 (c) A cricket match.

3. Either, Turn the following dialogue into the indirect form of narra- 10  
 tion :—

The miller dressed himself like a scholar and went to the master.

'Ask your questions without delay,' he said.

'How many ladders would reach the sky?'

'One, if it were long enough.'

'How long will it take to go round the world?'

'If I were as swift as the sun and the moon, I would run round it in twenty-four hours.'

'What am I thinking?'

'You are thinking that I am your pupil, but I am your brother, the miller.'

- Or, Analyse the following sentence :— 10

When I looked round upon the storied monuments with *which* grandeur mourned magnificently over departed pride and *turned* to this poor widow, bowed down by age and sorrow, at the altar of her God, and *offering up* the prayers and praises of a pious, though a broken heart, I felt that this living monument of real grief was *worth* them *all*.

4. Either, Parse the italicized words in the latter extract under Ques- 6  
 tion 3.

Or, Form short sentences to illustrate any *four* of the following :— 6  
 nominative absolute; the predicative use of an adjective; *as* used as a relative pronoun; *dare* used as an auxiliary verb; *country* used as an adjective; *many* used as a noun.

5. Either, Fill up the gaps in the following passage :— 6

Cordelia took leave—her jealous sisters with tears in her eyes. She begged them to take good care—their father. But they said it was not—her to teach them their duty. She should look—her husband's welfare, and not trouble—their. So Cordelia left the court fearing that her old father might suffer unkindness—her sisters' hands.

- Or, Substitute colloquial phrases for the words italicized in the fol- 6  
 lowing passage :—

As soon as I *entered* the room, all the lights were *extinguished*. I could not *immediately discover* the meaning of this though I could feel that there was trouble ahead. I did not, however, *abandon* all hope of *surmounting* any difficulty that might confront me.

6. Correct any *four* of the following sentences :— 8

(a) The poet describes that autumn is season of mists.

(b) I am not such fool that you can throw dust into my eyes.

(c) I am neither a poet or philosopher.

(d) I tried to read your letter, but it was such badly written that I had to leave the attempt.

(e) He told me that you have left school a year ago and seeking for a job.

(f) He was feeling himself very unwell, and it was this that prevented him to attend the meeting.

## SECOND PAPER

*Head Examiner*—MR. HIRANKUMAR BANERJEE, M.A.

*Examiners*—

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- „ JOSEPH ARULATHUM, B.A.
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- „ PRAMATHANATH CHAKRABARTI, M.A.
- „ JANARANJAN LAHIRI, M.A.
- „ SASIPADA SAHA.
- „ DIGINDRACHANDRA DATTA.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Either, Narrate briefly the story of *A Straggler* of '16, and explain the 15 meaning of the title.

Or, 'Those who read the story of Queen Chand will see that not by 15 mere pride of place did she gain for herself an undying name in the story of India, but by her qualities of courage, truth, and honour she achieved one of its most Golden Deeds.' Tell the story in your own words so as to illustrate these qualities of the Queen.

2. Either, 'I gazed—and gazed—but little thought 12  
What wealth to me the show had brought.'

Describe vividly the 'show' referred to in these lines of Wordsworth's poem *The Daffodils*, and indicate the immediate effect it produced on the poet's mind. What is the 'wealth' referred to in the second line?

Or, 'And with the last of all the hunter went, 12  
Who, wondering at the strange sight he had seen,  
Prayed an old man to tell him what it meant.'

Describe briefly the 'strange sight' seen by the hunter Milanion. What explanation did he get from the old man?

3. Explain, with reference to the context, any three of the following 15 passages —

(a) The forest-bordered meads did he behold,  
Where still 'mid thoughts of August's quivering gold  
Folk hood the wheat, and clipped the vine in trust  
Of faint October's purple-foaming must.

(b) To die !—'twas hard, whilst the sleek ocean glowed  
Beneath a sky as fair as summer flowers :—

'All to the boats !' one cried :—he was, thank God,  
No officer of ours !

(c) 'And in what way shall we bury you?' said Crito. 'In any way that you like,' said Socrates; 'but you must get hold of me, and take care that I do not run away from you.'

(d) All religions deserve respect on some ground; a man who abuses his neighbour's creed is really damaging his own.

4. Write notes on any four of the following :—hair-breadth escapes, 8  
Armageddon, the golden age, the wager of battle, 'no man's land', Adonis' bane.

5. Reproduce in simple prose the sense of one of the following 25 extracts :—

(a) Our life is a game of cricket, lads,  
An earnest noble game;  
So out with the bat and the gloves and the pads;  
To shirk is folly and shame.  
Come forth to the field where the struggle lies,  
And take each man his place,  
Whether batting, or bowling, or fielding; be wise,  
And do it with equal grace.  
It may be yours to take command,  
Or yours to just obey;  
Faithful obedience is as grand  
As skilful, prudent sway.



Your turn will come at the wicket, lads,  
 If you be ready and true;  
 And then, if you show good cricket, lads,  
 'Twill be all the better for you.

- (b) Don't crowd and push on the march of life,  
 Or tread on each other's toes,  
 For the world at best, in its great unrest,  
 Is hard enough as it goes.  
 Oh, why should the strong oppress the weak,  
 Till the latter go to the wall?  
 On this earth of ours, with its thorns and flowers.  
 There is room enough for all.  
 If a lagging brother falls behind,  
 And drops from the toiling band;  
 If fear and doubt put his soul to rout,  
 Then lend him a helping hand.  
 Cheer up his heart with words of hope,  
 Nor season the speech with gall:  
 In the great highway, on the busiest day,  
 There's room enough for all.

6. Give in simple English the substance of *one* of the following 25 passages :—

(a) A strange picture we make on our way to the land of our desires, ceaselessly marching, grudging ourselves the time for rest; indefatigable, adventurous pioneers. It is true that we shall never reach our goal; it is even more probable that there is no such place: and if we lived for centuries and were endowed with the powers of a god, we should find ourselves not much nearer what we wanted, at the end. O toiling hands of mortals! O unwearyed feet, travelling ye know not whither! Soon, soon, it seems to you, you must come forth on some conspicuous hill top, and but a little way further, against the setting sun, descry the spires of the Golden City. Little do you know your own blessedness; for to travel hopefully is better than to arrive, and the true success is to labour.

(b) 'Detestable phantom!' cried the traveller, as his horse sank with him into the morass; 'to what a miserable end have you lured me by your treacherous light!'

'The same old story for ever!' muttered the Will-o'-the-Wisp in reply. 'Always throwing blame on others for troubles you have brought upon yourself. What more could have been done for you, unhappy creature, than I have done? All the weary night through have I danced on the edge of this morass, to save you and others from ruin. If you have rushed in farther and farther, like a headstrong fool, in spite of my warning light, who is to blame but yourself?'

'I am an unhappy creature indeed,' rejoined the traveller: 'I took your light for a friendly lamp, but have been deceived to my destruction.'

'Yet not by me,' cried the Will-o'-the-Wisp anxiously, 'I worked out my appointed business carefully and ceaselessly. My light is ever a friendly light to the wise. It misleads none but the headstrong and the ignorant. You have mistaken the light that warned you of danger for the star that was to guide you to safety.'

## MATHEMATICS

## COMPULSORY PAPER

*Paper-Setters*— { DR. SYAMADAS MUKHERJEE, M.A., PH.D.  
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		„ PANCHUGOPAL GHOSHAL, B.Sc., B.T.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. (i) Reduce to the simplest vulgar fraction 8  

$$\frac{5\frac{1}{2} - 1\frac{1}{3}}{\frac{4}{5} + 6\frac{7}{8}} = \frac{3\cdot2 - 2\cdot88}{0\cdot97 + 6\cdot875}$$

(ii) Either, The population of India being 315 millions and the total yearly income being 11340 million rupees, find the yearly income of an Indian on the average. 5  
Or, Find the least number which is exactly divisible by 24, 32, 45, and 52, 5
2. (i) Find the cost of 4 maunds 31 seers 4 chhataks of rice at Rs. 2. 11 as. 4 pies per maund. 8  
(ii) Either, The number of literates in India was 116 out of every thousand persons in 1911, and increased to 140 per thousand by 1921. In how many years more will this number be 992 per thousand, if the rate of increase continues to be the same? 5  
Or, A man pays income tax at the rate of 9 pies in the rupee and also contributes to the Provident Fund at the rate of one anna in the rupee, of his salary. If he draws a balance of Rs. 445. 5 as. find his salary. 5
3. (i) Express a pie as the decimal of a rupee. 4  
(ii) Either, Find what sum of money will amount to Rs. 100 in five years at  $6\frac{1}{2}$  per cent. per annum simple interest. 5  
Or, A man buys milk at a certain rate per seer and after mixing it with water sells again at the same rate. Find how many chhataks of water there are in every seer if the man makes a profit of 20 per cent. 5
4. Either, (i) Find the H.C.F. of  $x^3 - 3x^2 + x - 3$  and  $x^4 + 6x^2 + 5$ . 6  
(ii) Solve 6  

$$\frac{x+y}{xy} = 5, \quad \frac{x-y}{xy} = 9.$$

Or, (i) Resolve into factors 6  

$$a^3(b+c) + b^3(c+a) + c^3(a+b) + 3abc.$$
(ii) The present age of a father is twice that of his son. Eight years hence their ages would be as 7 : 4. Find the son's present age. 6
5. Draw the graphs of  $3x - 2y = 6$  and  $2x + 3y = 0$  and measure their angle of intersection. 10
6. Either, If one side of a triangle is produced prove that the exterior angle is greater than either of the interior opposite angles. 7  
Show that it is impossible to draw three equal straight lines from a given point to a given straight line. 7  
Or, Prove that, if a straight line cuts two parallel straight lines, the corresponding angles are equal. 7  
Prove that, if the three sides of one triangle are parallel to the three sides of another triangle, the corresponding angles are equal. 7

7. *Either*, If a straight line drawn through the centre of a circle bisects a chord which does not pass through the centre, prove that it cuts the chord at right angles. 7

Show how to construct a circle of given radius to pass through two given points. When is this construction impossible? 7

*Or*, Prove that the tangent at any point of a circle and the radius through the point are perpendicular to one another. 7

Show how to draw a tangent to a given circle parallel to a given straight line. How many such tangents are possible? 7

8. Construct a square on a given finite straight line. (Give only the traces of all your constructions, using a hard pencil, a straight ruler, and a pencil compass only.) 8

Divide the area of a given square into parts from which two equal squares can be made up. 6

### ADDITIONAL PAPER

*Head-Examiner*—DR. SURENDRAMOHAN GANGULI, D.Sc.

<i>Examiners</i> -	MR. MANOMOHAN RAYCHAUDHURI, M.A.
	„ BHOLANATH MUKHERJEE, M.A.
	„ LALITKUMAR RAY, M.A.
	„ AMRITALAL CHATTERJEE, M.A.
	„ ABANIKANTA LAHIRI, M.A.
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	„ ABDUL HAKIM, M.A.
	„ PANCHANAN BANERJEE, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. (i) Find to four places of decimals the square root of 0.000647. 7

(ii) Either, Find to four places of decimals the value of : 7

$$1 + \frac{1}{2} \cdot \frac{1}{5} + \frac{1}{3} \cdot \frac{1}{5^2} + \frac{1}{4} \cdot \frac{1}{5^3} + \dots \text{ad. inf.}$$

Or, Evaluate to the nearest integer 7

$$\frac{27'18282 \times 3 \ 14159}{0.43129}$$

2. (i) Find the cost of fencing a square field of 2.5 acres at 3 annas 7  
11 244 pies per metre.

(1 acre = 4840 sq. yds., 1 metre = 39.37 inches.)

(ii) Either, A and B are at a distance of 95 miles and start at 7 a.m. cycling towards each other at the rate of 8 miles per hour and 10 miles per hour, respectively. After an hour A has an accident, which detains him for half an hour, after which he continues as before. Find when they meet. 5

Or, A, B, C go into business as partners and collect a profit of Rs. 1000. If A's capital : B's capital = 2 : 3 and B's capital : C's capital = 2 : 5, find the shares of the profit which go to each. 5

3. Either, (i) Solve  $(17x-8)(x-2)=555$ . 6

(ii) Simplify  $(x^a)^{b-c} \cdot (x^b)^{c-a} \cdot (x^c)^{a-b}$ . 6

Or, (i) Extract the square root of 6

$$x^4 + 6x^3 + 11x^2 + 8x + 7 + \frac{2}{x} + \frac{1}{x^2}$$

(ii) Solve  $(\sqrt{3})^{x+x} = 216$ . 6

4. Either, (i) Find the sum of  $n$  terms of an arithmetical progression of which the first term is  $a$  and the last term is  $l$ . 6

(ii) If  $a, b, c$  are respectively the  $p$ th,  $q$ th,  $r$ th terms of an A.P., prove that 6

$$a(q-r) + b(r-p) + c(p-q) = 0.$$

Or, (i) Find the sum of  $n$  terms of a geometrical progression of which the first term is  $a$  and common ratio  $r$  6

(ii) If of three consecutive terms of a G.P. the middle term is 6 and the first and third terms are together equal to 15, find the series. 6

5. Trace the graphs of  $y=x^2$  and  $x=y^2$  with tabulation of at least six points on each graph. Mention the coordinates of the points common to both. 12

6. Either, (i) Prove that the internal bisector of an angle of a triangle divides the opposite side in the ratio of the sides containing the angle. 7

(ii) The base of a triangle is 3 inches, the ratio of the sides is 1 : 3, and the vertical angle is  $60^\circ$ . Construct the triangle. 7

*(The traces of the constructions only are required.)*

Or, (i) Prove that the ratio of the areas of two similar triangles is equal to the ratio of the squares of the two corresponding sides. 7

(ii) Bisect a given triangle by a straight line drawn parallel to the base. 7

*(Traces of the constructions only are required.)*

7. (i) Prove that if two triangles are equiangular, their corresponding sides are proportional. 7

(ii) From a point on a river-bank a light is observed straight across on the other bank and at the level of the eye. Give a simple geometrical construction, on the basis of the above proposition, by which the distance of the light may be ascertained without crossing the river.

8. (i) Inscribe a regular hexagon in a given circle.

(The traces of the constructions only are required.)

(ii) Either, Prove that, if the alternate vertices are joined, the area of the triangle thus formed is half of that of the hexagon.

Or, Prove that the circumference of a circle is greater than three times the diameter.

# SANSKRIT

*Paper-Settlers* - { PROF. D. R. BHANDARKAR, M.A., PH.D.  
MR. HARIHAR BANERJEE, M.A.  
,, DEBENDRANATH RAY, M.A.

## COMPULSORY PAPER

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„ HIMANSUNATH MUKHUTI, VIDYABHUSHAN.
„ RAMGATI MUKHERJEE.
PANDIT SYAMACHARAN VYAKARANTIRTHA.
MR. PRAMADACHARAN BANDYOPADHYAY, M.A.
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„ JANAKIBALLABH BHATTACHARYA, M.A.
PANDIT DHURJJATIPRASAD BHATTACHARYA.
(Looked over answer-papers written in Uriya character.)
MR. MAHESWAR DAS, M.A.
(Looked over answer-papers written in Devnagri character.)
PANDIT DHARANIDHAR SARMA, B.A.
SRIMATI NALINIBALA DEY, M.A.
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MAHAMAHOPADHYAY VEDANTABISARAD ANANTA-KRISHNA SASTRI.
(Looked over answer-papers written in Marathi character.)
MAHAMAHOPADHYAY PANDIT SITARAM SASTRI.
(Looked over answer-papers written in Malayalam character.)
MAHAMAHOPADHYAY ANANTAKRISHNA SASTRI.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any FIVE of the following :—

5 × 5  
= 25

(a) तत् क्षम्यतामपराधः । अथैवं वदतोऽपि तस्य तेन विषफलं भक्षितम् : किं बहुना ? द्वावपि विनष्टौ ।

(b) एवं सम्प्रधार्य भूयोऽप्यचिन्तयत्—तदहमनशनं कृत्वा प्राणानुत्सृजामि, किमनेन व्यर्थजीवित-व्यसनेन ?

(c) जम्बूकोऽचिन्तयत्—फलितस्त्रावदस्माकं कपटप्रबन्धः मनोरथ-सिद्धिरपि बाहुल्यान्मे भविष्यति ।

(d) एवं द्वावपि विवदमानौ धर्माधिकरणं गतवन्तौ प्रोचतुः परस्परं कूषयन्तौ ।

(e) कुमार ! ज्योतिःशास्त्रविशारदेन केनचिद् ब्राह्मणेन तव राज्य-  
प्राप्ताबुदीरितायां राज्ञा भवद्बोधो व्यादिष्टः ।

(f) ततो गरुत्मता तद्वचनमाकर्ण्य प्रभुर्भगवान् नारायणः सृष्टि-  
स्थितिप्रलयहेतुर्विज्ञसः ।

(g) अथासौ नकुलो ब्राह्मणमायान्तमवलोक्य रक्तविक्षिप्तमुख-पादः  
सस्वरमुपगम्य तच्चरणयोलुलोठ ।

Expond the *samāsas* in the underlined word in (g); account for the 3+3  
case-endings in तस्य in (a), व्यसनेन in (b), and बाहुल्यात् in (c); account +1  
for शानच् in विवदमानौ in (d); and derive फलित in (e) and विज्ञस +2  
in (f). =9

2. Explain in English with reference to the context either (a) and 5×2  
(c) or (b) and (d) :— =10

- (a) यदि कैश्चिद्दहोरात्रैर्न द्रक्ष्यामि नलं नृपम् ।  
आत्मानं श्रेयसा योक्ष्ये देहस्यास्य विमोचनात् ॥
- (b) प्राणयात्रां परिप्रेप्सोः शकुनैर्हृतवाससः ।  
आधिभिर्दह्यमानस्य न श्यामा क्रोडुमर्हसि ॥
- (c) न तु सद्योऽविनीतस्य दृश्यते कर्मणः फलम् ।  
कालोऽप्यङ्गीभवत्यल शस्यानामिव पक्ष्ये ॥
- (d) तादृशांश्चोपदश्यैतान् विनतां छग्नना जिताम् ।  
दासीचकार, कष्टा हि स्त्रीणामन्यासहिष्णुता ॥

Expond the *samāsas* in हृतवाससः in (b); account for the case-1+2  
endings in देहस्य in (a), and पक्ष्ये in (c); derive योक्ष्ये in (a); and +1+  
disjoin the *sandhis* either in कालोऽप्यङ्गीभवत्यल in (c), or in तादृशां- 3=7  
श्चोपदश्यैतान् in (d).

3. Give either in English or in Sanskrit the story of *स्यमन्तक* in the 8  
विष्णुपुराण.

4. (a) Either, Decline the base युवन् in the ablative case (पञ्चमी) 3  
and एतद् in the genitive case (षष्ठी) in the feminine gender.

Or, Decline the base वृत्रहन् in the dative case (चतुर्थी) and the base  
भूपति in the genitive case (षष्ठी).

(b) Conjugate the root कृ (to do) in the first person in कङ् (in 3  
परस्मैपद only), and the root शी in लट् in the third person.

(c) Give the feminine forms of any two of the following :— 2

अशुरः, कर्तृ, विद्वस् and हरिण ।



5. Translate into Sanskrit any five of the following :—

5 × 5  
= 25

(a) Yesterday, as I was standing by the side of a mountain, I heard the roaring of a lion.

(b) He was permitted on that day to come to his paternal home, and to pay respects to his parents.

(c) The king Daśaratha had four sons and one daughter, of whom Rāma was the noblest.

(d) Cows are of different colours, but the colour of the milk they give is the same.

(e) It is said that at the age of fourteen he determined to be engaged in penance.

(f) When Rāṇā Yudhishtira beheld the dead bodies of his kinsmen he became extremely sorry.

(g) Now, as days went on, much treasure had been stolen by a thief from the palace of the king.

6. Correct any four of the following :—

(a) अस्य जगतस्य किमपि कर्त्ता विद्यते ।

(b) कस्मात् दिशात् आगतोऽसौ चौरः ।

(c) दिवायां उदिते सूर्ये सर्वे एव कर्म कुर्वन्ति ।

(d) धनेन ऋते सुखं न भवति, तथा विद्यया अन्तरेण सम्मानं न लभ्यते ।

(e) कोशलराज्ञः महिमा अपरा यशश्च निर्मलम् ।

#### ADDITIONAL PAPER

Head Examiner—MR. DEBENDRANATH RAY, M.A.

Examiners—	{	SRIMATI MALATI SEN, M.A.
		MR. SACHINDRANATH BANERJEE, M.A.
		„ SATYAKINKAR MUKHERJEE, M.A.
		„ ABHAYAPADA CHATTERJEE, M.A.
		„ ASOKNATH BHATTACHARYYA, M.A.
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		„ KALIRANJAN MUKHERJEE, M.A.
		„ HARIPADA CHAKRABARTI, M.A.
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		„ RAMENDRAMOHAN BASU, M.A.
		„ SRINATH CHAKRABARTI, M.A.
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		„ SUKUMAR BANERJEE, M. A.
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		„ PHATIKCHANDRA BHATTACHARYYA, M.A.
		„ DHIRENDRANATH BHATTACHARYYA, M.A.
		„ HARENDRAKUMAR CHAKRABARTI, M.A.
		PANDIT MAHENDRACHANDRA BHATTACHARYYA.
		MR. KALIPADA BHATTACHARYYA.
		„ TARAPADA BHATTACHARYYA, M.A.
		„ BHUPATICHARAN CHAKRABARTI.
		„ SURESCHANDRA SEN, M.A.
		(Looked over answer-papers written in Uriya character.)
		MR. MAHESWAR DAS, M.A.
		(Looked over answer-papers written in Uriya character.)
		M.M. PANDIT SITARAM SASTRI.
		(Looked over answer-papers written in Devnagri character.)
		RAI BAHADUR GOBINLAL BANERJEE, B.A.
		(Looked over answer-papers written in Malayalam character.)
		M.M. VEDANTAVISARAD 'ANANTAKRISHNA SASTRI.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Relate briefly in English either why Prince Bhoja was sought to be assassinated and how he was saved, or the story of the four sons of a Brāhmaṇa as given in the *Vetālapanchasāṭi*. 10

2 Translate into English any two of the following stanzas :—

5 × 2  
= 10

(a) प्रतिदिवसं याति लयं वसन्तवाताहतेव शिशिरश्रीः ।

बुद्धिर्बुद्धिमतामपि कुटुम्बभरचिन्तया सततम् ॥

(b) नाकाले विहितो मृत्युर्मर्त्यानां पुरुषर्षभ ।

यस्य कान्ता त्वयोत्सृष्टा मुहूर्त्तमपि जीवति ॥

(c) सर्वलक्षणसम्पन्नं न्यग्रोधपरिमण्डलम् ।

सत्यसन्धं महाभागमहं राममनुव्रता ॥

3. Translate into English any two of the following extracts :—

15 × 2  
= 30

(a) कस्मिन् मूढः पथिकः कदाचिद् भटवीम् भटवत्पिमासं दृष्ट्वातुरो-

ऽभवत् । कथमपि तत्काननं तीर्त्वा विमलसलिलां सरितम् एकां सम्प्राप्तः ।

परं जलम् अपीत्वा सस्पृहं नदीं पश्यन् स्थितः । किमिति तृषितोऽपि सलिलं न पिबसि इति कश्चन तत्रस्थस्तमपृच्छत् । तेनानुयुक्तः स मूढमति-  
रवदत्—कथम् एतावत् सलिलं पिबेयम् इति । ततः स पुरुषस्तं सोपहास-  
मुक्तवान्—रे जडबुद्धे ! त्वया सर्वं जलं न पीयते चेत् किं राजदण्डस्त्वां  
स्पृशेद् इति ?

(b) अयैकदा रात्रौ सकल्लग्नक्रन्दनध्वनिं स राजा शुश्राव । तत् श्रुत्वा  
राजा ब्रूते—कः कोऽत्र द्वारि तिष्ठति ? तदा तेनोक्तं देव ! अहं वीरवरः ।  
राजोवाच—क्रन्दनानुसरणं क्रियताम् । वीरवरोऽपि—यथाज्ञापयति देव  
इत्युक्त्वा चलितः । ततो नृपतिना चिन्तितम्, अयमेकाकी राजपुत्रो मया  
गाढान्धकारे प्रहितः, नैतद्विचितम् ; अहमपि गत्वा निरूपयामि किमेतदिति ।  
ततो राजापि खड्गमादाय तदनुसरणक्रमेण नगरद्वाराद् बहिर्निर्जगाम ।

(c) पुरा हि खेतायां देवासुरमतीव भीषणं युद्धमासीत् । तत्र च  
अतिबलिभिरसुरैरमराः पराजिता भगवन्तं विष्णुमाराधयान्नाक्रुः । प्रसन्नश्च  
देवानां नारायणः प्राह ज्ञातमेव मया युष्माभिर्यदभिलषितम्, तदर्थमिदं  
श्रूयताम्—पुरञ्जयनृपशरीरे अहमंशेन स्वयमेव अवतीर्य तान् अशेषान्  
असुरान् निहनिष्यामीति । एतत् श्रुत्वा प्रगम्य तैलोक्यनाथं पुरञ्जय-  
सकाशम् आजगमुरमरा ऊचुश्च एनम्—भोः क्षत्त्रियश्रेष्ठ ! अरातिवधो-  
द्यतानाम् अस्माकम् भवता साहाय्यं कृतमिच्छाम इति ॥

4. Correct the following :—

10

सो गृहे अधिवसति, तु मातारं न स्निह्यति । अहं त्वञ्च तत्र  
गमिष्यथः । पिता माता च भजनीये इति, अहं त्वं वा कथयिष्यामि, हि  
तव मे च वचनं स भयति ।

5. (a) Join in sandhi form three of the following :—

3

वसन् + अपि ; मातुः + रक्षा ; एतान् + च ; वृक्ष + छाया ;  
मनः + रथः ।

(b) Give the feminine forms of three of the following :—

3

सुन्दर, सेवक, सुदन्त, आचार्य, महाराज ।

(c) Frame short sentences to illustrate three of the following :—

3

(i) कर्मप्रवचनीययोगे द्वितीया । (ii) हेतौ तृतीया । (iii)

अनादरे षष्ठी । (iv) निर्धारणे सप्तमी ।

(d) Give the compound forms of *three* of the following :—

3

हस्तिनश्च अद्वाश्च ; प्रियः सखा ; तरुणां छाया ; तयाणां भुवनानां  
समाहारः ; महती बुद्धिर्यस्य सः ।

(e) Frame short sentences to illustrate the present (छङ्) third person singular of *three* of the following verbs :—

3

वि+जि ; अनु+कृ ; प्र+स्था ; वि+रम् ; प्र+युज् ।

6. Translate into Sanskrit any *five* of the following :—

5 × 5  
= 25

(a) The happy occasion lasted many days, during which the assembled guests passed the time in sports.

(b) A brother of Draupadi led her into the assembly, and proclaimed that he might win her who struck the eye of the golden fish.

(c) Presently a terrible roar was heard, and a big lion rushed out of a den.

(d) The brute ran forward with erected mane, and all eyes were turned upon the poor victim.

(e) Those who are devoted to doing good to others become the objects of God's mercy.

(f) The demon so pleased the god by his penance that he granted him several boons.

(g) The Jumna joins the Ganges there, and the place is held very sacred by all.

## PALI

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## COMPULSORY PAPER

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks

1. Translate into English two extracts from Group A and two from Group B :—

### GROUP A

15

(a) "Nāhañ deva payuttako, saccam eva vadāmi, sace me na saddaha-  
tha manusse pesetvā paccantagāmañ hañāpetha, te manusse gahevā  
attano santikam nite dhanam datvā vissajjessati " ti. Rājā "ayañ ati-  
viya sūro hutvā katheti, vimamsissāmi tāvā " ti attano purise pesetvā  
paccantagāmañ hañāpesi. Te cova gahevā Bārāṇasirañño dassesuñ.

(b) Corarājā : . . pabbātāya rattiyā uṭṭhite suriye hheriñ carāpetvā sabbaseniyō ca amaccabrāhmaṇagahapatike ca sannipātāpetvā tesāñ purato ākāse puñṇacandam ukkhipanto viya Silavarāñño guṇe kathetvā parisamajjhe yeva puna rājānañ khamāpetvā rājāñ paṭicchāpetvā “īto paṭṭhāya tumhākañ uppanno corupaddavo mayhañ bhāro, mayā gahitārakkhā tumhākañ rājāñ karothā” ti vatvā pesuññakarakassa āpañ katvā attano balavāhanāñ ādāya sakaraṭṭham eva gato.

(c) Tato sakunaganā Himavantappadesa ekasmiñ piṭṭhipāsāṇe sannipatitvā “Manussesu rājā paññāyati, tathā catuppadesu c’ eva macchesu ca, ambhākañ pañ’ antare rājā nāma n’ atthi. Appatissavāso nāma na vaṭṭati, ambhākañ pi rājānañ laddhuñ vaṭṭati.”

(d) Tā pañcasatā yakkhiṇiyo te pañcasate vāḍiye attano sūmikekaṃsu. Atha sā jeṭṭhayakkhiṇi rattibhāge vāḍiye niddaṃ gate uṭṭhāya gantvā kāraṇagare manusse māretvā mānasañ khādītva āgacchati. Sesāpi tath’ eva karonti.

(e) Atha nañ rājā aggbāpaniyakamme ṭhapesi. Tato paṭṭhāya rañño batthiratanāñ assaratanañ muttasāramanāsārādhi aggbāpeti. Ath’ eka-divasañ “rañño maṅgalabattā bhavissati” ti kālāpāsāpakūṭavapaṇṇaṃ ekañ vāraṇaṃ ānesuñ. Tañ divā rājā “pañḍitassa dassethā” ti āha. Atha nañ tassa santikañ nayiṃsu.

## GROUP B

10

(a) Ye puggalā attha satāñ pasatthā

Cattāri eḷāni yugāni honti |

Te dakkhiṇeyyā Sugatassa sāvaka

Etesu dinnāni mahapphaḷāni ||

Ye ariyasaccāni vibhāvayanti

Gambhīrapaññena sudesitāni |

Kiñcāpi te honti bhūsapamattā

Na te bhavañ atthamañ ādiyanti ||

(b) Paḍesarājāñ issariyañ cakkavattisukhañ piyañ ||

Devarājāñ pi dibbesu sabbam etena labbhati |

Mānussikā ca sampatti devaloke ca yā rati |

Yā ca nibbānasaṃpatti sabbam etena labbhati ||

(c) Phuṭṭhassa lokadhammehi cittañ yassa na kampati |

Asokañ viraṇaṃ khemañ etañ maṅgalamuttamañ ||

Etādisāni katvāna sabbattha-m-apaṇāyitā |

Sabbattha sotthiñ gacchanti tañ tesāñ maṅgalamuttamañ ||

2. (a) Account for the case-ending in *Bārāṇasirañño* in A (a) and *rattiyā* in A (b) in Question 1. 1

(b) Parse *āgamittha* in 1 A (a) and *gahitārakkhā* in 1 A (b). 1

(c) Derive *pasatthā* and *dakkhiṇeyyā* in 1 B (a) 1

(d) Explain EITHER *puggalā attha* or *bhavañ atthamañ* in 1 B (a). 2

3. Give in English a summary of EITHER the *Dadhivāhana-jātaka*, or the *Mahāsīlāva-jātaka*. 9

4. Draw a genealogical table to show the lineage of kings from *Jaya-sena* to *Suddhodana*, the father of *Gotama Buddha*. 8

5. Write explanatory notes on any three of the words italicized in the following stanza :— 3

*Paṭisambhidā vimokkha* ca yā sā *sāvaka-pārami* |

*Paccakabodhi* *Buddhabhūmi* sabbam etena labbhati ||

6. (a) Decline EITHER *Satthā* in the singular or *Āyu* in the plural. 3

(b) Conjugate EITHER *√yudh* (‘to fight’) in the aorist, or *√pā* (‘to drink’) in the future. 3

- (c) Define one of the following compounds, giving illustrations :— 4  
*Tappurisa, Digu, Bahubbhi.*
- (d) Give, with illustrations, the rules for the formation of any two 6  
of the following :—gerund, present participle, infinitive, intensive verbs.
- (e) Frame sentences to illustrate the use of any two of the follow- 4  
ing :—*pana, kira, vata, maññe, kho.*
7. Correct errors, if any, in any five of the following : — 5
- (a) Eko bālisiko pañce rohitamacche uddhari.
  - (b) Idam sakunam amhe detha.
  - (c) Manussā tam diṭṭhā somanassajātāni abhesum.
  - (d) Dhammam supāhi. upasathakamma karāhi.
  - (e) Aham rāvyāhi volāram karimha.
  - (f) Bhagavā Jetavane antarad'āyi.
  - (g) Alohi mallo mallena saddhim.
8. Translate the following sentences into Pāli : — 25
- (a) Has he come?
  - (b) Has he not come?
  - (c) How many days ago did he arrive in this city?
  - (d) I prefer the study of Pāli to that of any other language.
  - (e) In the cold season the cobbler's house began to burn. A poor neighbour proceeded thither to warm himself. A jester, who saw it, said : "How astonishing ! When one person's house is burning, another sits warming himself at the fire !"

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into idiomatic English any three of the following extracts, 12  
adding short explanatory notes to indicate their historical importance :—

(a) *Tadā ekacce vāṇiṇā disākākam gahetvā nāvāya Bāveru-ratṭham agamaṃsu. Tasmīn kira kāle Bāveru-ratṭhe sakunā nāma n' utthi. Āgatagatā ratṭhavāsino tam kupaṇe n-sinnam disā "Passatha imassa chavivappam galapariyosānam mukhatundakam mapigulasadisāni akkhini" ti kāmam eva pasamsitvā te vāṇiṇake āhamsu : "Imam ayyo sakunam ambhākam detha."*

(b) *Tasmīn tattha vasante vāṇiṇā nāvām ajjētvā "Kam niyyāmakam karissāma" ti mantentā "Suppāraka-paṇḍitena ārūha-nāvā na vyāpajjati, esa paṇḍito upāyakuṇḍalo andho samāno pi suppāraka-paṇḍito va uttamo" ti tam upasaṅkamitvā "Niyāmakam no hohi" ti punappunam yācimsu.*

(c) *Antarāmagge ekasmiṃ araṇṇatṭhāne pañcasatā pesannācorā nāma panthagbhātāni karonti. Te Bodhisattā ca Vedabbha brāhmaṇaṇ ca gaṇhiṃsu.*

- (d) *Tirokuḍḍesu tiṭṭhanti sandhi-siṅghāṭakesu ca |  
dārābhāsu tiṭṭhanti āgantvā sakam gharāni ||*
- (e) *Nidhiṃ nidheti puriso gombhīre odakantike |  
Atthe kicce samuppanne atthāya me bhavissati ||  
Tāva sambahito santo gambhīre odakantike |  
na sabbo sabbadā eva tassa tam upakappati ||*

2. Comment on any two of the following extracts bringing out the purport of each :— 6

- (a) Nigrodham eva seveyya, na Sākhāṃ upasaṃvase |  
Nigrodhasmiṃ mataṃ seyyo, yaṅ ce Sākhasmīṃ jīvitān ti ||
- (b) Evaṃ so nihato seti yo apujāṃ namassati |  
yathā'haṃ ajja pahato hato meṇḍena dummattī ti ||
- (c) Yath'indakhilo paṭhaviṃ sito siyā catubbhi vātebhi asampakampiyo |  
tathūpamaṃ sappurisaṃ vadāmi ||
- (d) Yathā vārivahā pūrā paripūrenti sāgarāni |  
evaṃ eva ito dinnāni petānāni upakuppati ||

3. Either, Write a short historical note on Bimbisāra from the information you can gather from the *Dīpaṃsa*. 7

Or, What part is played by the Bodhisattva in the *Jātakas* read by you? How is it that in the *Baka-Jātaka* a tree-spirit figures as the Bodhisattva instead of the crane?

4. (a) Analyse the sandhi in *aṭṭhamsu yera*. 1  
(b) Expound the samāsa in *somanasajāto*. 1  
(c) Account for the 3rd case-ending in *meṇḍena* in 2 (b). 1
5. (a) Decline *muni* in the abl. and gen. cases, *bhikkhu* in the dative and loc., and *itthi* in the instr. and dat. cases. 3

(b) Conjugate the root  $\sqrt{gām}$  (to go) in the aorist (3rd pers.),  $\sqrt{pac}$  (to cook) in the optative (2nd pers.), and  $\sqrt{thā}$  (to stand) in the future (1st pers.) 3

6. How are desideratives formed in P. li? Give the desiderative present tense, 3rd pers. and singular form of  $\sqrt{paṭh}$  (to read),  $\sqrt{vat}$  (to fall), and  $\sqrt{pā}$  (to drink). 5

7. Frame simple sentences in Pāli to illustrate the use of any three of the following in declinables :—*kiva*, *handa*, *sāmaṃ*, *sakiṃ*, and *saddhiṃ*. 6

8. Translate any two of the following extracts :— 30

(a) Atīte Bodhisatto sihayoniyaṃ nibbattitvā bahunnaṃ sīhānaṃ rājā ahosi. So anekasīha-parivāro raṇṇa-kuhāyaṃ vāsati kappesi. Tassa avidūre ekissā kuhāya eko sigālo pi vasati. Ath' ekadivasāṃ deve vassitvā vigate sabbe sīhā sīharājasaṃ eva gubādvāre sannipatitvā sīhanādaṃ nadantā sīhakīlaṃ kiṇanti. Tesam evaṃ naditvā kiṇanākaḷe so pi sigālo vassī. Sīhā tassa saddaṃ sutvā "Ayaṃ sigālo amhehi saddhiṃ nadati" ti tuṇhī ahesuṃ.

(b) Bārāṇasirāṇi Rūhako nāma purohito ahosi. Rājā tassa assa-bhaṇḍakena alaṃkaritvā assaṃ adāsi. So taṃ assaṃ āruya rāṇi upa-ṭṭhānaṃ gacchati. Atha naṃ alaṃkatassa assassa piṭṭhe nisīditvā gacchantā diṣvā tattha tattha thitā manussā "Aho assassa rūpaṃ, aho asso sobhati" ti assaṃ eva pasaṃsanti.

(c) Yassa rukkhassa chāyāya nisīdeyya sayeyya vā |  
na tassa sākhaṃ bhañjeyya, mittadūbho hi pāpako ||  
Yathā rukkho tathā rājā, yathā sākha tathā ahaṃ |  
yathā chāyūpago poso evaṃ tvam asi sārathi ||

9. Translate into Pāli :—

In days of yore there was in Northern India a large kingdom, called Kosala. Its capital was Śāvatthi. A virtuous king named Pasenadi reigned in this city. He was a lay-supporter of the religion of Buddha, the Blessed One. In this city there lived a rich banker named Anāthapiṇḍika. He purchased a beautiful royal park and presented the same to the Buddha.

## ARABIC

## COMPULSORY PAPER

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*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following :—

ارايتم الذي يكذب بالدين - فذلك الذي يدع اليتيم -  
ولا يحض على طعام المسكين - فويل للمصلين الذين هم عن  
صلاتهم ساهون - الذين هم يراءون و يمنعون الماعون \*

B

اذ قال ربك للملئكة اني جاعل في الارض خليفة -  
قالوا اتجعل فيها من يفسد فيها و يفسك الدماء - ونحن  
نسبح بعهدك و نقديس لك - قال اني اعلم ما لا تعلمون -  
وعلم آدم الاسماء كلها ثم عرضهم على الملئكة فقال انبئوني  
باسماء هؤلاء ان كنتم صدقين - قالوا سبحانك لا علم لنا الا ما  
علمتنا انك انت العليم الحكيم \*

C

هو الامام الاعظم ابو حنيفة النعمان بن الثابت فقيه العراق -  
ولد ثمانين سنة من سلالة فارسية - و نشأ بالكوفة و عام بعض



الصعابة و ثقل عنهم - و كن من اعبد الناس و اكثرهم تعجدا  
و قراءة للقرآن الكريم و اكثرهم ورعاً - و كان محباً للكسب  
من وجه حل - رضى ان يعيش تاجر خز و رغب عن وظائف  
الملوك و الخلفاء \*

2. Answer any five of the following :—

(a) Rewrite the extract 1. C with full vowel-points. 5

(b) Mention the صيغة of the following words :— 5

يكذب - يدع - يراءون - انبئوني - صدقين

(c) Give the opposite number of any five of the following :— 5

طعام - يتيم - دماء - صعابة - ملوك - تاجر - فقيه - عبد

(d) State the تعليل of the following :— 5

مُقيّم - قال - دأى - تجدد - بعث

(e) Form imperatives ( امر حاضر معروف ) from— 5

يفسد - تعلمون - تجعل - يمنعون - يكذب

(f) Name the افعال القلوب and form sentences with them. 5

(g) Define اسم المبالغة and state with examples any five mea- 5

sures in which it occurs.

3. Translate into English the extract (a) and either (b) or (c) :—

(a) 8  
الناس من جهة التمثال اكفاء

ابراهيم آدم و الام حواء

فان يكن لهم في اصلهم شرف

يفخرون به فالطين و الماء

ما الفخر الا لاهل العلم انهم

على الهدى لمن استهدى ادلاء

قدر كل امرء ما كان يحسنه

الجاهلون لاهل العلم اعداء

(b) 8  
اعلموا يا سادة يا كرام - انه كان لي اب تاجر و كان من

اكابر الناس و التجار - و كان عنده مال كثير و نوال جزيل -

قد مات و انا ولد صغير خلف لى مالا و عقارا و ضياعا - فلما  
كبرت وضعت يدى على الجميع و قد اكلت مليحا و شربت  
شربا مليحا و عاشرت الشباب بلبس الثياب و مشيت مع  
الغلان و الاصحاب - و اعتقدت ان ذلك يدوم لى و ينفعنى  
... و تذكرت كلام بعض الشعراء حيث قال

بقدر الكد تكتسب المعالى

و من طلب العلى سهر الليالى

(c) كلب مرة كان فى دار اصحابه دعوة - فخرج الى السوق  
فلقى كلبا آخر - فقال له اعلم عندنا دعوة فامض بنا  
لناكل و نشرب اليوم جميعا - فمضى معه فدخل به الى  
المطبخ - فلما نظره الخدام قبض احدهم على ذنبه و رمى  
به من العائط الى خارج الدار - فرقع مغشيا عليه - فلما  
افاق انتفض من التراب فراه اصحابه - فقالوا اين كنت  
اليوم - فانا نراك ما خرجت اليوم تدري كيف الطريق \*  
معناه

الطفيل ربما يصير مطرودا بعد الاستخفاف و الهوان

4. Either, Reproduce the story of Hajjāj and the old men. 8  
Or, Write short biographical notes on Nūshīrwān and al-Ma'mūn.  
5. Correct and re-write with vowel-points :— 10

كان قائمٌ زيدا - رأيتُ ابْرَحْمَصَ عمرو - الغلام الرجل  
هرب من دارة - جاءنى مسلمون كلكته - يا عَبْدُ الرحمنُ  
ما اسم ابوك \*

6. Translate into Arabic :—

- (a) I have purchased this book from him.  
(b) He passed the night in sleep.  
(c) If you go to walk, I will also go.  
(d) Eighty-four men came to me.  
(e) These women passed by 12 riders.  
(f) Zaid is a vastly learned man; he acquired knowledge in Baghdad.  
(g) There was an oppressive king who persecuted his subjects.  
(h) Ahmad's servant is writing a letter in his room.  
(i) The people of that country are poor but religious.  
(j) He is bearing all these troubles so that he may enter paradise in the next world.

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate only one of the following extracts :—

12

A

دخل ابن هرمة على المنصور و امتدحه - فقال له المنصور سل حاجتك - فقال تكتب الى عاملك انه اذا وجدنى سكران لا يعذني - فقال له المنصور هذا حد لا سبيل الى تركه فقال ما لى حاجة غيرها - فقال لكتبه اكتب الى عاملنا بالمدينة من اتاك بابن هرمة و هو سكران فاجلده ثمانين جلده و اجلد الذى جاء به مائة - فكان الشرطة يمررون عليه و هو سكران و يقولون من يشتري ثمانين مائة فيمرون عليه و يتركونه \*

B

ان ملوك الهند تلبس فى اذانهم الاقراط من الجواهر النفيس المركب من الذهب و تضع فى اعناقهم القلائد النفيسة المشتملة على فاخر الجواهر الاحمر و الاخضر و اللؤلؤ مما يعظم قيمته و هى اليوم كنوزهم و ذخائرهم و تلبسه قوادهم و رجودهم - و الرئيس منهم على عنق رجل منهم و في يده جترة و هى مظلة من ريش الطواويس ياخذها بيده فيبقى بها الشمس و اصحابه يطوفون حوله \*

2. Either, Give the substance of—

8

حكاية الملك خسرو و شيرين مع صياد السمك

Or, Write down, briefly, the story of العابد و اللؤلؤ

3. Translate into English :—

18

(a) و ان قال الله يا عيسى ابن مريم انت قلت للناس اتخذوني و امي الهين من دون الله - قال سبحانه ما

يَكُونُ لِي اَنْ اَقُولَ مَا لَيْسَ لِي بِحَقٍّ - اِنْ كَذَبْتَ قُلْتَهُ نَقْدَ  
 عِلْمَتِهِ - تَعْلَمُ مَا فِي نَفْسِي وَ لَا اَعْلَمُ مَا فِي نَفْسِكَ - اِنَّكَ  
 اَنْتَ عَلَّامُ الْغُيُوبِ - مَا قُلْتَ لَهُمْ اِلَّا مَا اَمَرْتُنِي بِهِ اَنْ اَعْبُدَ  
 وَاللّٰهُ رَبِّي وَ رَبُّكُمْ وَ كُنْتُ عَلَيْهِمْ شَهِيدًا مَا دُمْتُ فِيهِمْ -  
 فَلَمَّا تَوَفَّيْتَنِي كُنْتُ اَنْتَ الرَّقِيبُ عَلَيْهِمْ وَ اَنْتَ عَلٰى كُلِّ شَيْءٍ  
 شَهِيدٌ - اِنْ تُعَذِّبْهُمْ فَاتَّهُمْ عِبَادُكَ وَ اِنْ تُغْفِرْ لَهُمْ فَاِنَّكَ اَنْتَ  
 الْعَزِيزُ الْحَكِيمُ \*

12 (b) قِيلَ اِنْ شَاعِرًا كَانَ لَهُ عَدُوٌّ فَبَيْنَمَا هُوَ سَائِرُ ذَاتِ يَوْمٍ فِي  
 بَعْضِ الطَّرِيقِ اِذَا هُوَ بَعْدُوهُ فَعَلِمَ الشَّاعِرُ اَنْ عَدُوَّهُ قَاتِلُهُ لَا مَحَالَةَ  
 فَقَالَ لَهُ يَا هَذَا اَنَا اَعْلَمُ اَنْ الْمَنِيَّةَ قَدْ حَضَرَتْ وَ لَكِنْ سَأَلْتُكَ  
 اَللّٰهُ اِذَا قَتَلْتَنِي اَمْضِ اِلَى دَارِي وَ قِفْ بِالْبَابِ رَقْلًا : اِلَّا  
 اِيْهَا الْبَنَتَانِ اِنْ اِبَاكَمَا - فَقَالَ سَمِعَا وَ طَاعَةً - ثُمَّ اِنَّهُ قَتَلَهُ -  
 فَلَمَّا فَرَّغَ مِنْ قَتْلِهِ اَتَى اِلَى دَارِهِ وَ وَقَفَ بِالْبَابِ وَقَالَ : اِلَّا  
 اِيْهَا الْبَنَتَانِ اِنْ اِبَاكُمْ - وَ كَانَ لِلشَّاعِرِ ابْنَتَانِ فَلَمَّا سَمِعَتَا ذَلِكَ  
 مِنْهُ اِجَابَتَاهُ بِغَمٍّ وَاحِدٍ : قَتِيلُ خَدَا بِالْثَّارِ مِنْ اِتَاكَمَا - ثُمَّ  
 تَعَلَّقَتَا بِالرَّجْلِ وَ رَفَعَتَاهُ اِلَى الْحَاكِمِ فَاسْتَقَرَّهُ فَاقْرَأَ بِقَتْلِهِ فَقَتَلَهُ \*

4. Answer any five of the following :—

- (a) Re-write the extract (b), in Question 1, with full vowel-points.  
 (b) Give the roots of the following words :—

استغفر - اتق - خذ - صفا - تكرم

- (c) What are the افعال المقاربة ? Give examples for each.

(d) Write down the opposite numbers of the following words with full vowel-points :—

ابحر - ديار - منايا - جراد - عجز

- (e) Enumerate اعراب حروف شرط and give their اعراب

- (f) Use the following words in short sentences of your own :—

احد عشر - لو كنا - يالهي نفسي - خذ - دع

(g) Correct or justify :—

الرجال قوام على النساء - رابينا شيخ كبير - سبعة بقراد  
يا زيدا اسقني ماء باردا - خلق السموات والارض في ستة ايام

5. Translate into Arabic :—

- (a) Love of the world is the source of all sins.
- (b) When will you go to your school?
- (c) How many flowers have you collected from the garden?
- (d) The rivers in India are very deep and broad.
- (e) I saw the new moon last evening.
- (f) I think it wrong.
- (g) The appointed time has drawn near.
- (h) Speak the truth and do not fear.
- (i) Do not fight among yourselves.
- (j) Surely, he is a great scholar.
- (k) Go out both in the morning and in the evening.

## PERSIAN

### COMPULSORY PAPER

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" SYED KARIM AGHA.  
" MD. WAJIEH.  
" FAZLUL RAHMAN BAQUI.

*Candidates are required to give their answers in their own words  
• as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into simple English one of the following passages :— 12

A

یکی در بیابان سگی تشنه یافت  
 بر رن از رمتق در حیاتش نیافت.  
 کله دلو کرد آن پسندیده کیش  
 چو حبل اندران بست دستار خویش  
 بخدمت میان بست و بازو کشاد  
 سگی ناتوان را دمی آب داد  
 خبر داد پیغمبر از حال مرد  
 که داور گناهان از عفو کرد  
 الا گر جفاکاری اندیشه کن  
 کرم پیشه گیر و وفا پیشه کن  
 کسی با سگی نیکوی گم نکرد  
 کجا گم شود خیر با نیک مرد

B

بر سر بالین بیماران گذر  
 ز آنکه هست این سنت خیر البشر  
 تا توانی تشنه را سیراب کن  
 در مجالس خدمت اصحاب کن  
 خاطر ایتم را دریاب نهز  
 تا ترا پیروسته حق دارد عزیز  
 چون شود گریان یتیمی نا گهان  
 عرش حق در! جنبش آید آن زمان  
 آنکه خنداند: یتیم خسته  
 باز یابد ت در بسته را

در جرانی دار پسران را عزیز  
تا عزیز دیگران باشی تو نیز

2. Sketch the life of the author. *either* of A or of B, of Question 1. 7

3. Explain one of the following :— 10

A

خورشید برده اند که رفتند زیر خاک  
آن ذرها که هر همه اندر هوا شدند  
بازیچه ایست طفل فریب این متاع دهر  
بی عقل مردمان که بدین مبتلا شدند  
خسرو گریز کن که وفا رفت زینجهان  
ز اهل وفا که همچو جهان بی وفا شدند

B

کرم گرچه خلق آتشی بود تباهی گران را تباهی بود  
گر اکنون بیشمائی از کار زشت کنی گر بمعراب دراز کفشت  
کشاید در رحمت کردگار گناهت بیامرزد آمرزگار

4. Answer any *three* of the following :—

18

(a) Give the meanings and Arabic opposite numbers of—

ملک - غلام - ادبا - عوام - ارکان - کریم

(b) Give the force of “چه” of “قربانی” in “می”

in “بسم الله” of “ب” of “پسر” in “ر” of “دریچه”

of “شادگان” in “گان” and of “بهاران” in “ان”

(c) Enumerate the important kinds of *إضافة* and give examples.

(d) How do you form the diminutive (اسم تصغیر) in Persian? Give examples.

5. Translate any *two* of the following into English :—

10

A

یاد دارم که در ایام طفلی متعبد بودم و شب خیز - و مولع  
بزه و پرهیز - شبی در خدمت پدر نشسته بودم - و همه شب دیده بهم  
ن بسته - و مصحف عزیز در کنار گرفته - و طائفه گرد ما خفته - پدر را  
گفتم از یاران یکی سر بر نمیدارد که دو گانه بگذارد - چنان خفته اند

که گوئی مرده اند - گفت - ای جان پدر اگر تو نیز بختی به  
از آنکه در پوستین خلق افتی \*

B

در شهر مصر غیر قاهره هفت جامع است چنانکه بهم  
پیوسته - بهر در شهر پانزده مسجد آدینه است - که  
روزهای جمعه در هر جای خطبه و جماعت باشد - در میان  
بازار مسجدیسه که آنرا باب البوامع گویند - و آنرا  
عمر رعاص ساخته است - به روزگاری که در آن معاریه  
امیر مصر بود - و آن مسجد به چهار صد عمود رخام  
قائم است -

C

نابینائی! در شب تاریک چراغی در دست و سبوی  
بردوش در راهی میرفت - فضولی بوی رسید و گفت -  
ای نادان روز و شب پیش تو یکسان است - و روشنی  
و تاریکی در چشم تو برابر - این چراغ را فائده چیست -  
نابینا بخندید و گفت - این چراغ نه از بهر خود است -  
از برای چون تو کوردلان بیخرد است - تا بمن یهلو  
نزنند و سبوی مرا نشکنند -

6. *Esther*, Write in your own words about **در کعبه**  
as described by Nāsir-i-Khuerāu in his *Safarnāmā*.

Or, Explain the following line with reference to the context :—

زاهد که درم گرفت و دینار زاهد تر از ر کسی بدست آر

7. Correct the errors in the following :—

6

زید دیروز خواهد آمد - من و یار من آمدند -  
انسان اشرف المخلوقات هستند - پیر و جوان حاضر است -

8. Translate into Persian :—

25

I met my friend in the maidān yesterday in the evening after a long time. I enquired as to where he had been so long. He replied that he had gone to Agra to see the Tāj Mahal, and that he had returned only that day. We then had a long talk on the Tāj. Afterwards we went to the riverside and enjoyed the evening breeze.



در جوانی دار پیران را عزیز  
تا عزیز دیگران باشی تر نیز

2. Sketch the life of the author, *either* of A *or* of B, of Question 1. 7  
3. Explain *one* of the following :— 10

A

خورشید بوده اند که رفتند زیر خاک  
آن ذرها که هر همه اندر هوا شدند  
باز بچه ایست طفل فریب این متاع دهر  
بی عقل مردمان که بدین مبتلا شدند  
خسرو گریز کن که وفا رفت زینجهان  
ز اهل وفا که همچو جهان بی وفا شدند

B

کرم گرچه خلق آتشی بود      تباهی گران را تباهی بود  
گر اکنون بیشمائی از کار زشت      کنی گر بمعراب رو از کفشت  
کشاید در رحمت کردگار      گناهت بیامرزد آمرزگار

4. Answer any *three* of the following :— 18

(a) Give the meanings and Arabic opposite numbers of—

ملک - غلام - ادبا - عوام - ارکان - کریم

(b) Give the force of “ی” in قربانی; of “چه” of “ی”

بسم الله; of “ب” in “پسر”; of “ر” in “دریچه”; of “ان” in “شائگان”; and of “گان” in “بهاران”.

(c) Enumerate the important kinds of اضافت and give examples.

(d) How do you form the diminutive (اسم تصغیر) in Persian?

Give examples.

5. Translate any *two* of the following into English :—

10

A

یاد دارم که در ایام طفلی متعبد بودم و شب خیز - و مریع  
بزد و پرهیز - شبی در خدمت پدر نشسته بودم - و همه شب دیده بهم  
نبسته - و مصحف عزیز در کنار گرفته - و طائفه گرد ما خفته - پدر را  
گفتم از بیان یکی سر بر نمیدارد که درگاه بگذارد - چنان خفته اند

که گویی مرده اند - گفت - ای جان پدر اگر تو نیز بخفتی به  
از آنکه در پوستین خلق افتی \*

B

در شهر مصر غیر قاهره هفت جامع است چنانکه بهم  
پیوسته - بهر در شهر پانزده مسجد آدینه است - که  
روزهای جمعه در هر جای خطبه و جماعت باشد - در میان  
بازار مسجدیست که آنرا باب الجوامع گویند - و آنرا  
عمرو عاص ساخته است - به روزگاری که دران معاریه  
امیر مصر بود - و آن مسجد به چهار صد عمود رخام  
قائم است -

C

نابینائی<sup>۱</sup> در شب تاریک چراغی در دست و سبوی  
بر درش در راهی میرفت - فضولی بوی رسید و گفت -  
ای نادان روز و شب پیش تو یکسان است - و روشنی  
و تاریکی در چشم تو برابر - این چراغ را فائده چیست -  
نابینا بخندید و گفت - این چراغ نه از بهر خود است -  
از برای چون تو کوردلان بیخرد است - تا بمن پهلوی  
نزنند و سبوی مرا نشکنند -

6. Either, Write in your own words about **صفت کشودن در کعبه**  
as described by Nāsir-i-Khusrau in his *Safarnāmā*.

Or, Explain the following line with reference to the context :—

زاهد که درم گرفت و دینار زاهد تر از ر کسی بدست آر

7. Correct the errors in the following :—

6

زید دیروز خواهد آمد - من و یار من آمدند -  
انسان اشرف المخلوقات هستند - پیر و جوان حاضر است -

8. Translate into Persian :—

25

I met my friend in the maidān yesterday in the evening after a long time. I enquired as to where he had been so long. He replied that he had gone to Agra to see the Tāj Mahal, and that he had returned only that day. We then had a long talk on the Tāj. Afterwards we went to the riverside and enjoyed the evening breeze.

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English one of the following :—

13

A

آردره اند که نعمان بن منذر ملکی بود در قریب  
العهد باسلام - پیش از منصب حکومت متنعم بودی  
و جامه های نفیس پوشیدی و پهلوی جز در حریر نهدی  
چون حکومت یافت جامه پشمین پوشیدی و دیگر در  
تنعم نکوشیدی \* قطعه \*

ترک آسایش خود باید کرد  
حاکمی که علم حکم افراشت  
خواب در دیده ار چون آید  
هر کرا پاس جهان باید داشت

B

چيست دانی زندگی محنت کشی  
شاد بودن در خوشی و ناخوشی  
چون مصیبت بر نماید مرد را  
لاجرم تسلیم باید مرد را  
چيست حاصل گرگربان پاره کرد  
از رضا و صبر باید چاره کرد  
در مصیبت های دوران شاد باش  
گر جهان زندان شود آزاد باش  
کار این عالم همه هیچ است هیچ  
شادی و ماتم همه هیچ است هیچ  
هر گلی را گرچه خاری در پی است  
هر خزان را هم بهاری در پی است

2. *Either*, Write a short account of the author of extract (A), in Question 1. 8

Or, Explain the idea contained in line 6 of extract (B).

8. Answer any three of the following :—

15

(a) Give the Persian equivalents of :—*He may come. He should go. He had been there. He used to write. He has gone away.*

(b) Give the opposite genders of :—

- خروس - معلم - خانم - عجز - اسپ - بیگ - خادمه  
- غلام - دختر - سلطان

(c) Give the meanings of the following and frame sentences illustrating their use :—

- دل شکسته - خانه بدوش - سرگردان - چشم براه  
- تنگ حوصله

(d) Correct the mistakes in the following :—

من بایشان صحبت کردیم - او هیچ تعام خورد -  
زید کاغز چاک کرد - ده روپیه ها از او قرز گرفتم -  
پای اهد لنگ کرد -

4. Translate into English :—

30

یکی از سلاطین ترکستان که در ظلم مشهور بود  
قاصدی دانا با صد نفر سوار پیش حاکم فارس فرستاد  
و پیغام داد که شنیده ام در ملک شما قسمی از گیاه  
پیدا میشود که از خوردن آن درازی عمر حاصل می آید -  
اگر قدری از آن برای من بفرستید بعید از دوستی  
و محبت نیست - حاکم فارس قاصد را با همراهانش در  
جائی حبس کرد که کوهی بزرگ و قلعه محکم بر مقابل  
آن بود گفت که هرگاه این کوه و قلعه خراب شود  
آنوقت با جواب پیغام اجازت برگشتن خواهم داد -  
ایشان در فکر افتادند که این کوه و این قلعه چند  
مدت میخوابد که خراب شود و درین انتظار عمر ما  
بآخر خواهد رسید - پس هر کدام صبح و شام بدعای  
خراب شدن کوه و قلعه مشغول شدند - در اندک

زمان زلزله سختی بدید آمد - قلعه افتاد و کوه خراب  
 شد - به حاکم فارس خبر دادند - حاکم آنها را بخواست  
 و گفت که این جواب پیغام شماست که دعای صد نفر  
 قلعه را خراب و کوه را با خاک برابر میکند - پس پادشاه  
 ظالم که بنفرین هزارها خلق گرفتار است - چگونه عمر  
 او درازی یابد -

5. Translate into Persian :—

35

There was a beautiful garden near my house. It had many big and small trees. At the time of spring it was full of flowers of different colours. This garden belonged to a rich man, and he allowed the neighbours to use his garden. Every Sunday he came to his garden and distributed flowers and fruits to those who happened to be there. He was therefore loved by all, young and old.

## LATIN

### COMPULSORY PAPER

*Paper-Setter*—MR. C. E. LOMAX.

*Examiners*— { MR. NALINIMOHAN CHATTERJEE, M.A.  
 ,, NIRMALCHANDRA MITRA, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

12

- (a) Tempus erat quo prima quies mortalibus aegris  
 incipit et dono divum gratissima serpit.  
 in somnis, ecce, ante oculos maestissimus Hector  
 visus adesse mihi largosque effundere fletus,  
 raptatus bigis ut quondam, aterque cruento  
 pulvere perque pedes traiectus lora tumentis.  
 ei mihi, qualis erat, quantum mutatus ab illo  
 Hectore qui redit exuvias indutus Achilli,  
 vel Danaum Phrygios iaculatus puppibus ignis;  
 squalentem barbam et concretos sanguine crinis  
 vulneraque illa gerens, quae circum plurima muros  
 accepit patrios.
- (b) Aedibus in mediis nudoque sub aetheris axe  
 ingens ara fuit iuxtaque veterrima laurus  
 incumbens arae atque umbra complexa penatis.  
 hic Hecuba et natae nequiquam altaria circum,  
 praecipites atra ceu tempestate columbae,  
 condensae et divum amplexae simulacra sedebant.

ipsum autem sumptis Priamum iuvenalibus armis  
ut vidit, 'quæ mens tam dira, miserrime coniunx,  
impulit his cingi telis ? aut quo ruis?' inquit.  
'non tali *auxilio* nec defensoribus istis  
tempus eget; non, si ipse meus nunc *adforet* Hector.  
huc tandem concede; hæc ara tuebitur omnis,  
aut *morieri* simul.'

2. Name the metre of the passages in Question 1, and scan the third and fourth lines in passage 1 (b). 3

3. Parse *tumentis* and *morieri*; and give reasons for the case of *auxilio* and the mood of *adforet* (words italicized in Question 1 (a) and 1 (b)). 4

4. *Either*,

Hic aliud maius miseris multoque tremendum  
obicitur magis atque improvida pectora turbat.

Explain what this was.

Or, Explain, without translating, the following passages :—

(a) Iam summas arces *Tritonia*, respice, *Pallas*  
insedit, nimbo effulgens et *Gorgone* saeva.

(b) *Sanguine* placastis ventos et *virgine caesa*.

5. Translate into English :—

11

(a) Acie triplici instituta et celeriter octo milium itinere confecto, prius ad hostium castra pervenit quam quid *ageretur* Germani sentire possent. Qui omnibus rebus subito perterriti, et celeritate adventus nostri et discessu suorum, neque consili *habendi* neque arma *capiendi* spatio dato perturbantur, copiasne adversus hostem ducere, an castra defendere, an fuga salutem petere præstaret. Quorum timor cum fremitu et concursu significaretur, milites nostri pristini diei perfidia incitati in castra irruerunt.

(b) Primo per omnes partes perequitant et tela coiciunt atque ipso terrore equorum et strepitu rotarum ordines plerumque perturbant et, cum se inter equitum turmas insinuaverunt, ex essedis desiliunt et pedibus proeliantur. Aurigæ interim paulatim ex proelio excedunt atque ita currus collocant ut, si illi a multitudine hostium premantur, expeditum ad suos receptum habeant. Ita mobilitatem equitum, stabilitatem pedum in proeliis præstant, ac tantum usu cotidiano et exercitatione efficiunt uti in declivi ac præcipiti loco incitatos equos sustinere et brevi moderari ac flectere et per temonem percurrere et in iugo insistere et se inde in currus citissime recipere *consuerint*.

6. Account for the mood of *ageretur* and *possent*, and parse *habendi*, *capiendi*, and *consuerint* (words italicized in 5 (a) and 5 (b)). 5

7. What measure of success did Caesar achieve in his first invasion of Britain? 5

8. Explain the words—*legatus*, *legio*, *cohors*, *supplicatio*. 4

9. Translate into English :— 25

Caesar, quo facilius equites Pompei ad Dyrrachium contineret et pabulatione prohiberet, aditus duos, quos angustos esse demonstravimus, magnis operibus munivit et castella in his locis posuit. Pompeius, ubi nihil proficere equites cognovit, paucis intermissis diebus, eos ad se intra munitiones recepit. Erat tanta inopia pabuli ut foliis et radicibus equos alere cogerentur; frumenta enim, quæ fuerant intra munitiones sata, consumpserant. Tandem, postquam non modo pabulum herbaeque omnibus locis desectæ sunt, sed etiam frondes ex arboribus deficiebant, corruptis macie equis Pompeius aliquid sibi conandum esse existimavit.

10. Translate into Latin :—

(a) Leaving Labienus with three legions and 2,000 horse-soldiers to protect the harbours, he himself set sail with five legions. 3

(b) He urged the guards of the bridge not to lose the opportunity of liberating Greece. 3

(c) If I were to deny that the road is rough, I should be telling a lie. 8

(d) The prisoner was brought before the king, who asked him where he had concealed his money. To this the man replied that he had indeed been rich once, but that now all his money had been taken from him by the soldiers, and that nothing was left. The king asked the soldiers if this was true, but they all declared that they had not taken the gold, and did not know where the prisoner kept it. 16

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. (a) Translate into English :—

Diverso interea miscentur moenia luctu,  
et magis atque magis, quamquam secreta parentis  
Anchisae domus arboribusque oblecta recessit,  
clareacunt sonitus armorumque ingruit horror.  
excitior somno et summi fastigia tecti  
ascensu supero atque arrectis auribus asto :  
in segetem veluti cum flamma furentibus Austris  
incidit, aut rapidus montano flumine torrens  
sternit agros, sternit sata laeta boumque labores  
*praecipites* que trahit silvas : stupet inscius alto  
accipiens sonitum saxi de vertice pastor.

(b) Parse *oblecta* and *praecipites* in the above passage, and state what figure of speech it contains.

Explain (without translating the passage) the allusions in :—

‘ Scilicet haec Spartam incolumis patriasque Mycenae  
aspiciet partoque ibit regina triumpho  
coniugiumque domumque patres natosque videbit.’

(c) Translate into English :—

Pugnatum est ab utrisque acriter. Nostri tamen, quod neque ordines servare neque firmiter insistere neque signa subsequi poterant atque alius alia ex navi quibuscumque signis occurrerat se aggregabat, magnopere perturbabantur; hostes vero, notis omnibus vadiis, ubi ex litore aliquos singulares ex navi egredientes conspexerant, incitatis equis impedites adoriebantur, plures paucos circumstabant, alii ab latere aperto in universos tela coiciebant. Quod cum animadvertisset Caesar, scaphas longarum navium, item speculatoria navigia militibus compleri iussit et, quos laborantes conspexerat, his subsidia submittebat.

(d) Translate the following passages :—

(i) Hunc ad egrediendum nequaquam idoneum locum arbitratus, dum reliquae naves eo convenirent ad horam nonam in ancoris expectavit.

Give the reason of the mood of *convenirent*, and explain *ad horam nonam*.

(ii) 'Desilite,' inquit, 'milites, nisi vultis *aquilam* hostibus prodere; ego certe meum rei publicae atque *imperator*i officium praestitero.'

Explain *aquila* and *imperator*.

(iii) Propinqua die aequinoctii infirmis navibus hiemi navigationem subiciendam non existimavit.

Explain the ablatives in this sentence.

2. Translate into English :—

80

Caesar, ut per se consilium caperet quid faciendum videretur, navem conscendit atque omnem classem se sequi iussit nullis nostris militibus impositis, quod munitiones nudare nolebat. Cumque ad eum locum accessissent, qui appellatur Chersonensus, aquandique causa remiges in terram exposuissent, non nulli ex eo numero, cum longius a navibus praedatum processissent, ab equitibus hostium sunt excepti. Ex his cognoverunt Caesarem ipsum in classe venisse nec ullos milites in navibus habere. Qua re comperta magnam sibi facultatem fortunam obtulisse bene gerendae rei crediderunt. Itaque navis omnis quas paratas habuerant ad navigandum propugnatoribus instruxerunt Caesarique redeunti cum classe occurrerunt.

3. Translate into Latin :—

80

(a) If you see him, do not say that you have seen me.

(b) The more often I approached him, the less friendly did he seem to be.

(c) Fearing that he would not be able to withstand the enemy's attack, he sent a letter to Caesar.

(d) This task is far too difficult for us to undertake alone : we need help.

(e) The brave Roman general determined to attack the enemy without further delay. Calling his men together he told them that their lives depended upon their own constancy and courage. 'There are your foes', he said, 'encamped on yonder hill. They are more numerous than you, and have the advantage of their position. But you have discipline, and discipline always wins the day.' Cheered by these words the legionaries raised a loud shout, and, when the signal to attack was given, charged with such vigour that the enemy were quickly dislodged.

4. (a) Give the gender, accusative plural, and genitive plural of—*nox*, *agger*, *classis*, *heres*, *gens*, *gens*, *res*, *genu*, *cubile*, *arbor*. 5

(b) Decline, in the singular only, *illae pulchrae mulieres*; and in the plural only *gravius onus*. 2

(c) Give—(i) the other degrees of comparison of—*dubius*, *acrius*, *constans*, *benevolus bene*; and (ii) the Latin for 123 and five each. 7

(d) Give the 2nd singular present imperative active and passive of *duco* the future participle of *morior*, and the principal parts of—*fin*go, *vivo*, *orior*, *pario*. 6



## COMPULSORY PAPER

*Paper-Setter and Examiner—REV. FR. E. POPULAIRE, S.J.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate three of the following passages :—

24

(a) Mais au moment où Mousqueton venait annoncer que les chevaux étaient prêts et où l'on se levait de table, l'étranger proposa à Porthos la santé du cardinal. Porthos répondit qu'il ne demandait pas mieux, si l'étranger à son tour voulait boire à la santé du Roi. L'étranger s'écria qu'il ne connaissait d'autre roi que son Eminence. Porthos l'appela ivrogne; l'étranger tira son épée.

(b) Moi, je l'ai vu, dit la petite Marie, en faisant effort pour rentrer ses larmes. Il courait avec d'autres enfants et je me suis bien doutée qu'il était hors de la maison depuis longtemps, car il avait faim et mangeait des prunelles et des mûres de buisson. Je lui ai donné le pain de mon goûter, et il m'a dit : 'Merci, ma Marie mignonne : quand tu viendras chez nous, je te donnerai de la galette.' C'est un enfant trop gentil que vous avez là, Germain !

(c) Chevalier Lorgnèz, retourne à ton roi;  
De lui j'ai souci tout comme de toi.  
Retourne à Paris, il est temps encor,  
Montrer dans les bals ta cuirasse d'or;  
Sinon, chevalier, je rendrai ton sang  
Froid comme la pierre ou l'eau de l'étang.  
—Chevalier Les-Breiz, au fond de quel bois  
As-tu vu le jour, chevalier courtois?  
Mon dernier valet, Bobereau si fier,  
Fera bien sauter ton casque de fer.

(d) Après je sors du lit et quand je suis vêtu  
Je me range à l'étude et apprends la vertu,  
Composant et lisant, suivant ma destinée.  
Qui s'est dès mon enfance aux Muses inclinée :  
Quatre ou cinq heures seul je m'arrête enfermé,  
Puis, sentant mon esprit de trop lire assourmé,  
J'abandonne mon livre et m'en vais à l'église.  
Au retour, pour plaisir, une heure je devise.

2. Write a brief biographical sketch of any of the following :—Dumas, 8  
George, Sand, Bernardin de Saint-Pierre.

3. Translate idiomatically :—*manger un morceau sur le pouce; se 8  
trouver mal; il n'en vient guère; à la bonne heure; à force de regarder;  
tout à l'heure; je me fis à l'idée de rester; il pensa tomber.*

4. (a) Account for the subjunctives in the following sentences :— 6

- (i) C'est heureux que ma lettre soit arrivée.
- (ii) Crois-tu que nous soyons en danger de mort?
- (iii) C'est le plus beau livre que j'aie lu.

(b) Write down the third person plural of the present indicative and 4  
of the past definite (preterite) of—*devoir, voir, prendre, rompre.*

5. Translate into French :—Did he say so? No, it is I. Is this your 30  
book? No, it is his. Give it me. When will you give it me? I think  
he said he would be here to-morrow. Wait (*attendre*) till I write to you.

I will let (*faire*) you know the date. I doubt whether he knew that. I knew that you would succeed. Can you tell me the exact (*juste*) time? Why did you do it? What are you reading? That does not concern you.

6. Translate into English :—

20

(a) *Le Colibri. (The Humming-Bird.)*

Il est si petit qu'il se perd  
Quand du soir souffle la risée;  
Par une goutte il est couvert,  
Par une goutte de rosée.  
Du chasseur il brave le plomb,  
Car où l'atteindre? Il est si frêle  
Et si léger qu'un cheveu blond  
Pèse plus à l'air que son aile.  
Il s'endort au milieu des fleurs;  
Quand il vole de tige en tige  
Avec son chant et ses couleurs,  
Il semble une fleur qui voltige.

(b) Je rentrai chez ma mère très troublé, sans vouloir le paraître; je luttai contre la leçon que je venais de recevoir, je jurais tout bas de ne point céder et de continuer à prendre la vie joyeusement. Je cherchais d'autant plus à me fortifier dans mon impénitence que je m'attendais aux reproches de Madeleine. Préparé à y couper court par une déclaration d'indépendance, j'entrai dans notre pauvre demeure le front haut et d'un pas délibéré.

### ADDITIONAL PAPER

*Candidates are required to give their answer in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate *three* of the following passages :—

18

(a) Une arme qu'un nœud d'or suspendait à son cou,  
Le barde l'entendit résonner tout à coup :  
La harpe dont la voix peut adoucir les bêtes,  
Eteindre l'incendie et calmer les tempêtes !  
' Toi qui dans son palais fis trembler plus d'un roi,  
O harpe redoutable ! o mère de l'effroi !  
Ici, fais sans aigreur sonner la triple corde :  
Harpe, sois aujourd'hui mère de la concorde !

(b) ' Page, où courez-vous à travers le champ ?  
Vos bras sont couverts de fange et de sang.  
Dans mon ermitage, il faut vous laver.  
—Je cherche une source, où donc la trouver ?  
Je cherche de l'eau pour mon doux seigneur  
Brisé de fatigue et tout en sueur.  
Treize combattants tombés sous ses coups !  
L'insolent Lorgnèz le premier de tous.

(c) Au bout de quelque temps, ils quittèrent, sans s'en apercevoir le sentier frayé dans lequel ils avaient marché jusqu'alors et ils se trouvèrent dans un labyrinthe d'arbres, de lianes et de roches, qui n'avait plus d'issue. Paul fit asseoir Virginie, et se mit à courir çà et là, tout hors de lui, pour chercher un chemin hors de ce fourré épais; mais il se fatigua en vain. Il monta au haut d'un grand arbre, pour découvrir au moins la montagne.

(d) Réfléchissez bien à ce que vous allez faire, ditelle d'un ton menaçant. Je suis Anglaise, et les citoyens anglais sont inviolables dans tous les pays du monde. Ce que vous me prendrez vous servira peu et vous coûtera cher. L'Angleterre me vengera, et vous serez tous pendus, pour le moins. Maintenant, si vous voulez de mon argent, vous n'avez qu'à parler; mais il vous brûlera les doigts, c'est de l'argent anglais!

2. (a) Write a brief summary of one of the following stories :—EITHER 8  
*Un Voyage Aventureux*, or *Mathurin et Pierrette*.

(b) Write short notes on three of the following :—Chantilly, 6  
Medon, le mistral, Trianon, la Guerre de Trente Ans.

3. Write :—

(a) in the feminine—*sois toujours bon, franc et studieux, mais jamais faux ou cruel*;

(b) in the plural—*Quel bel arbre ! C'est un grand travail. Ce chou est gros.*

4. Supply the proper forms of the verbs in brackets in the following 10  
sentences :—

(a) Je voudrais qu'il (*écrire*) à sa mère.

(b) Elles sont (*enchanter*) de vous recontrer.

(c) Il vint à moi et me (*soumettre*) une proposition.

(d) Dites-moi s'il désire qu'on l'(*attendre*).

(e) Il n'y avait probablement personne qui le (*connaître*).

5. Translate into French :—

30.

(a) (i) I have been waiting for you since three o'clock.

(ii) Will you be at home to-morrow?

(iii) Why did you not give it to him?

(iv) What have you in your right hand?

(v) I saw him on Monday the thirty-first of January.

(b) On the eighteenth of June, 1815, more than a century ago, the famous battle of Waterloo was fought near Brussels. It was a Sunday morning, and in England the bells were ringing in a thousand churches, when far away the battle began which was to determine the future of France and of Europe. If that day the French had been victorious, the history of modern Europe might have been entirely changed. Every year thousands of people visit the battle-field, to see with their own eyes the spot where that great struggle took place.

6. Translate into English :—

20.

(a) Parmi les courtisans qui lui rendaient hommage

Un jour, Henri le Grand dans la foule aperçut

Un homme assez mal mis et fort laid de visage.

Ne le connaissant point, ce monarque couçut

Le désir de savoir le rang du personnage.

Il l'appelle et lui dit : ' Quel est donc votre emploi ?

Qui servez-vous ? . . . ' Le rustre amoureux de son être,

Répondit d'un ton fier : ' Je n'appartiens qu'à moi !

—Je vous plains, mon ami ! lui répliqua le roi :

Vous ne pouviez jamais avoir un plus sot maître. '

(b) Il faudrait avoir parcouru ces belles routes du comté de Kent. semées de gros villages et bordées de terres en riche culture, ou de jardins délicieux, pour se former une idée de l'impression que cette vue produisit sur notre jeune voyageur. La rapidité de ses pensées ne pouvait suffire à tout ce qui le frappait dans cette succession de tableaux intéressants. Le noble spectacle du travail et de l'industrie élevait son esprit, autant que les douces images de l'aisance et de la fertilité attendrissaient son âme.

## CLASSICAL ARMENIAN

Paper-Setters—{ MR. ZEBEDEE HANANIAN.  
                          ,, S. MIHIGIAN.

## COMPULSORY PAPER

Examiner—MR. ZEBEDEE HANANIAN.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :—

26

Ս'ունչելով բարբառ արձակեալ և ասէ.—Երգուեալ իցէ  
իմ յարեգակն 'ի մեծ աստուած որ ճառագայթիւքն իւրովը  
լուսաւորէ զամենայն տիեզերս, և ջերմութեամբն կենդանա-  
ծնէ զամենայն գոյացեալսն. Եթէ վաղիւ ընդ առաւօտն,  
ընդ երեւումն սքանչելւոյն, ընդ իս զիւրաքանչիւր ծունր  
նմա ոչ կրկնեցիք՝ խոստովանելով զնա աստուած, ոչ ինչ  
թողացուցից ձեզ՝ զամենայն նեղութիւնս չարչարանաց 'ի  
վերայ ածելով, մինչեւ ակամայ կատարիսջիք զկամս հրա-  
մանաց իմոց.

2. Parse :—

8

ա. Ս'ատուցին առ նա զամենայն հիւանդս.

բ. Աճեաց մանուկն և հատուցաւ ի ստենէ.

3. Decline :—

10

Այր մի, ոմն, գիւղ. փոքր, զգեստ.

4. Conjugate :—

12

Լուանամ, առնեմ, ճանաչիմ. հատանեմ.

5. Translate into Classical Armenian :—

30

I will arise and go to my father, and will say unto him, Father, I have sinned against heaven, and before thee, and am no more worthy to be called thy son : make me as one of thy hired servants. And he arose, and came to his father. And when he was yet a great way off, his father saw him, and had compassion, and ran, and fell on his neck, and kissed him. And the son said unto him, Father. I have sinned against heaven, and in thy sight, and am no more worthy to be called thy son. But the father said to his servants, Bring forth the best robe, and put it on him; and put a ring on his hand, and shoes on his feet : and bring hither the fatted calf, and kill it; and let us eat and be merry.

## 6. Correct the following :—

Ս'եսորովս էր շինական, սնած և ուսած առմեծն 'Լ.եր-  
սէս, և յետ ելից նորա աշխարհէ 'սա սիրեաց մենակեացու-  
թեան վարք: Եւ երբ որ վարվապետէր Ս'եսորովս 'ոչ քիչ  
վտանի կրէր, որովհետեւ ինքն էր կարթացող և դարբ-  
մանիւ:

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable.*

*The figures in the margin indicate full marks.*

## 1. Translate into English :—

30

Լ'որդ աղաչեմ զձեզ, ով քաջ նիզակակիցք իմ, մանաւ-  
անդ զի բազումք 'ի ձէնջ լաւագոյնք էք քան զիս արութեամբ,  
և գահու 'ի վեր ըստ հայրենի պատուոյն. բայց յորժամ  
ձերով կամօք և յօժարութեամբ առաջնորդ և զօրագլուխ  
ձեզ կացուցէք, հեշտ և բաղձալի թուեսցին բանք իմ 'ի  
լսելիս մեծամեծաց և փոքունց: Ս'ի' երկուցեալ զանգիւնս-  
ցուք 'ի բազմութենէ հեթանոսացն, և մի' յահագին սրղյ.  
տուն մահկանացուի զթիկունս դարձուցուք. զի եթէ տօցէ  
Տէր յաղթութիւն 'ի ձեռս մեր, սատակեսցուք զզօրութիւն  
նոցա, զի բարձրացի կողմն ճշմարտութեան. և եթէ  
հասեալ իցէ ժամանակ կենաց մերոց սուրբ մահուամբ  
պատերազմիս, ընկալցուք խնդութեամբ սրտիւ. բայց միայն  
յարութիւնս քաջութեան՝ վատութիւն մի' խառնեսցուք:

## 2. Translate into Modern Armenian :—

20

Talent is by no means rare in the world; nor is even genius.  
But can the talent be trusted?—can the genius? Not unless based on  
truthfulness—on veracity. It is this quality more than any other that  
commands the esteem and respect and secures the confidence of others.  
Truthfulness is at the foundation of all personal excellence. It exhibits  
itself in conduct. It is rectitude, truth in action, and shines through every  
word and deed. It means reliableness, and convinces other men that it  
can be trusted. And a man is already of consequence in the world when  
it is known that he can be relied on.

3. Translate into Classical Armenian :—

8

- ա. Հրէից երկիւղից դուրս չելան.  
բ. Գետի ափով գնում էր:  
գ. Խնչու՞ մինչեւ այդ տեղ կարդալ տւիք.  
դ. Երախտաւորին հանդէպ ապերախտ մի գտնւիք.

4. Translate into English :—

12

Աղուիսու ասի 'ի ճաշ նախ հրաւիրեալ զՔրապիւ  
Պատրաւ տելով նըմա ումպ լոյծ 'ի պնակի,  
Օրո ճաշակել երբէք նըմա չէր հնար:  
Հրաւէր ապա արար և ինքն արագիւ,  
Եւ մատուցեալ լի փըշրանօք շիշ 'ի մէջ,  
Ալտուց 'ի ներքս արկանէ ինքն 'ի յագուրդ,  
Սովալըլուկ ըզճաշակից իւր թողեալ:  
Եւ մինչ 'ի զուր լիզոյր նա զուլն անօթոյն,  
Աւանդի չըքնաղապիւտ հաւոյն ալսպէս խօսեցեալ.  
“ Համբերութեամբ պարտի կըրել որ ինչ ալլում որ  
արար ”:

5. Answer in Modern Armenian :—

20

(a) ա. Վանի՞ մասունք բանի կայ.

բ. Որոնք՞ են.

գ. Տուր ամէմէկից մկ օրինակ.

(b) ա. Վանի՞ տեսակ բայ կայ.

բ. Որոնք՞ են.

գ. Տուր ամեն մէկից մի օրինակ.

(c) ա. Որն է ներգործական բայի խնդիրը—Տուր մի  
օրինակ.

բ. Որն է կրաւորական բայի խնդիրը—Ո՞ր օրինակ  
տուր.

գ. Ի՞նչ է ստորոգելի.—Տուր մի օրինակ.

(d) ա. Ի՞նչ է բառազննութիւն.

բ. Ի՞նչ է վերլուծութիւն.

գ. Ի՞նչ է համաձայնութիւն.



2. Explain fully the significance of the following stanza :—

10

བསགས་པ་ཀུན་གྱི་མཐའ་རྒྱུ་ཅིང་།

མཐོན་པོ་ཤེས་ཀྱི་མཐའ་རྒྱུ་ཅིང་།

ཕྱད་པའི་མཐའ་ནི་འབྲེལ་བ་ལྟེ།

གསོན་པའི་མཐའ་ནི་འཆི་བ་ཡིན།

3. Give a short summary *either* of the life of Mutig Khri-shing *or* of the story of the 'Notorious Thief.' 10

4. Correct the errors in the following :—

10

(a) སྒོན་པོ་ཤེས་པ་ . . . འཕམ་སྒོ་འདྲང་ནས་བཅུད་དོ།

(b) ཕན་ཚུན་ཉིས་ཀྱིས་འདིས་བདག་གསད་དོ།

(c) བདག་ནི་འདི་ན་འདྲོབས་ལྷན་ཚུན་གྱིས་ལྷན།

5. Translate *either* of the following extracts into classical Tibetan :—

30

(a) A young woman had lost her only child, her first-born son, and wept bitterly at Lord Buddha's feet and knew no consolation. She took the cold corpse from her breast, and, holding it up to Him, begged Him over and over again to breathe the spark of life into it. 'Thou art the Lord,' said she, 'and hast life and death in thy hands. Do thou give me back the child of my bosom.'

(b) Then said the Enlightened One to the bereaved mother, to teach her by something she might better understand, 'Daughter, fetch me a handful of mustard seeds, wherewith to call life back to the lifeless. But, hark thee, the seeds must be got from a man or a woman that has not had the death of a dead one to mourn, or they shall fail in their virtue.'



## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words  
as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate the following extracts into English :—

40

(a) དེ་ནས་བཅས་པ་ཡན་འདས་ཀྱི་ཐུགས་རྗེའི་དྲིན་དུ་བསམས་ནས། དགེ་འདུན་  
མཚན་པའི་སྤྲད་དུ་བཅོས་པ་ཡན་འདས་ལ་སྤྱིག་དང་རིན་པོ་ཆའི་སྤྱིས་བཟང་པོ་བསྐྱར་བ།  
ཆོང་པ་ནམས་སྤར་འཁོར་ནས་བཅོས་པ་ཡན་འདས་ལ་ཕུལ་ཞིང་། ཀྱན་དགའ་བོས་ཞུས་པས་  
གཡོག་མོ་རོ་དྲི་དེ་སྤྱི་བ་ཡིན་ཞིང་། སྤྱི་བ་གཞན་དུ་འབྱོར་བ་ཕྱག་པའི་ང་ཀྱལ་དང་།  
རྫོངས་བའི་སེམས་ཀྱིས་མཚན་པ་ལ་སེར་སྤྲ་ཆེ་བ་བྱས་པས། དུན་རིང་པོར་གཡོག་མོའི་  
ལུས་སྤྱིས་བ་ཡིན། འདི་ཐོན་ལྷ་ར་ཏ་སིར་ཆོང་པ་ལོར་ཆེན་བའི་ཆུང་མ་རིན་ཆེན་བྱ་  
བའི་ཆུང་མ་རིན་ཆེན་ཟེར་བར་སྤྱིས། ལོར་ཆེན་འདས་རྗེས་བྱད་མེད་དེས་མཚན་དེན་གྱི་ཕྱིར་  
དོ་ཤལ་ཕུལ་ཞིང་། མཚན་པ་ཆེན་པོ་ཕུལ་ཞིང་། མཚན་པ་ཆེན་པོ་ཕུལ་བས་ད་ལྟ་སྤྱི་  
ལའི་བདག་མོ་སྤྱིག་འབྲི་ཤིང་དུ་སྤྱིས་བ་ཡིན་ཅིང་། ང་དང་ཆོས་ལ་དད་པས་ ཡོངས་སྤྱི་  
སྤྲ་ངན་ལས་འདས་ པ་ཐོབ་བོ།

(b) ས་བདག་འདུལ་སྤྱོད་བཅས་པ་དེ་ལ་ཆགས།  
ཤིན་དུ་དྲི་ཞིས་བྱག་པ་མཚོག་འཆང་ཞིང་།  
ས་བདག་བཙན་མོ་ཟེལ་མངར་བཟང་ཆས་ཀྱིས།  
སྤྲོད་བཀང་མཁྱོགས་འབྲོ་མཚོག་ཕྱིར་འཛིན་པར་བྱས།

2. Fully explain the purport of the following :—

10

དམ་པའི་འབྲོ་བ་གཉིས་ཡིན་དེ།  
མེ་རྟག་དག་གི་ལོ་ལོ་ལོ་གས་བཞིན།  
འཇིག་རྟེན་ཀྱན་གྱིས་སྤྱིར་བཀྱར་བའམ།  
གསལ་ཉིད་དུ་ནི་དེངས་པར་བྱ།

3. Correct the errors in the following :—

5

ཡལ་གྱི་མིང་ནས་འབྲས་པའི་སྤྱི་ནང་དོ་བས་ཐན་དུ་འདུག་ཏེ།

4. Give *five* Tibetan proverbs with their English equivalents, and fully explain their significance in relation to practical life. 10

5. Conjugate any *three* of the following roots in the past and future tenses and in the imperative mood :— 9

- (a) གཞུག་པ་; (b) འཁྱེད་པ་; (c) གདོང་པ་; (d) འཁྱེད་པ་;  
(e) བདུང་པ་।

6. Translate the following passage into classical Tibetan :—

26

Now the mother's eyes were opened. In her alarm and anxiety she remembered the much-wronged Chanda's promise of help to her and secretly sent a messenger to him, telling him all through the man,..... begging for his forgiveness and conjuring him to hasten.....to save the state and his father's house of hoary fame. Chanda readily obeyed the summons. He came at the head of a troop of sturdy Rajputs, fought a bloody battle at the gates of the capital, in which the wicked grandfather and some of his sons were killed, and soon purged the state of the remaining usurpers and their retainers.

### BENGALI (FOR MALE CANDIDATES)

*Paper Setter*—RAI BAHADUR DR. D. C. SEN, B.A., D.LITT.

*Examiners*— $\left\{ \begin{array}{l} \text{SRIMATI SANTA NAG, B.A.} \\ \text{,, SNEHALATA RAYCHAUDHURY, M.A.} \\ \text{,, PUNNYAPRAVA DASGUPTA, B.A.} \end{array} \right.$

#### COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far practicable.*

*The figures in the margin indicate full marks.*

*Write your answers in pure সাধু ভাষা or in pure চলিত*

*ভাষা. A mixture of both is undesirable.*

1. Translate into English any four of the following :—

24

(a) একদা তিনি নিশাকালে গো-দোহন করিবার অস্ত্র বাহিরে যান।  
পথে একটি কুম্বসর্প পান্দস্পৃষ্ট হইবা মাত্র তাঁহাকে দংশন করে এবং তিনি  
পঞ্চম প্রাপ্ত হন।

(b) বাহার মুখ কুশের অগ্রভাগ দ্বারা কত হইলে তুমি দীর্ঘদূরতৈল  
দিয়া ব্রণশোষণ করিয়া দিতে, সেই বাত্‌হীন হরিণ-শিশু তোমার গতিরোধ  
করিবে।

(c) অশিক্ষিত বাহা বুঝেন, অশিক্ষিতকে ডাকিয়া কিছু কিছু বুঝাই-  
সেই লোক শিক্ষিত হয়।

(d) “আমাকে ঋষিভূলা বিমল ধর্ম্মাপ্রিত বলিয়া জানিও,” যিনি একদা এই কথা বলিয়াছিলেন, আজ তিনি শোকোন্মত্ত ।

(e) ব্রাহ্মণ-ব্রাহ্মণী যুগপৎ অতিথির দিকে ফিরিলেন । তিনি মুহুম্বদ হাসিতে ছিলেন । সে হাসিতে ভুবন পুলকের ধারায় ভাসিয়া গেল ।

(f) নিখিল জগৎ প্রতি ক্ষণেই তাহার বিচিত্র স্পর্শ দ্বারা আশাদিগকে এই কথাই বলিতেছে : আপনাকে বিকশিত কর, আপনাকে সমর্পণ কর, আপনার দিক হইতে একবার সকলের দিকে ফের ।

(g) আপনি যে আশায় উৎসাহিত হইয়া পদব্রজে এই সুদীর্ঘ পথ কষ্টে অতিক্রম করিতেছেন, আপনার সে পরিশ্রমের পুরস্কার-প্রাপ্তির প্রত্যাশা নাই—যাইলে পণ্ডিত হইবে যাত্র ।

2. Expound the *samāsas* :—

5

গো-দোহন, পাদস্পর্শ, ব্রণশোষণ, ধর্ম্মাপ্রিত and ব্রাহ্মণ-ব্রাহ্মণী ।

3. (a) State whether anything strikes you as grammatically anomalous in the passage (c) Question 1. 2

(b) Parse the words underlined in (a), (b), (d), (e), (f), and (g) in Question 1. 8

4. Explain in English with reference to the context any three of the 15

(a) পাঠশালে তার ছিল হাত-টান, দৃষ্টিও ছিল খর,  
“নষ্টচন্দ্রে” কত ফল মূল গোপনে করিত জড় ।  
পালিত যতনে বিড়াল, কুকুর পশুপক্ষী নানা জাতি,  
জানিনে তো যোরা কবে হ’তে হ’ল সাধু-ক্ষকিরের সাথী ।

(b) জনমি’ ঐষ্টান-কূলে ঐষ্ট-নামে তরাতে বসিতে  
চাহ নাই ; তাই তো নাস্তিক তুমি নর-সেবা-ব্রত ।  
অর্থদানে মুক্তপাণি, বিজ্ঞানদানে অত্যন্ত নিরত,  
আর্জের ছাত্তের বন্ধ, ছিলে পটু মাগুষ গড়িতে ।

(c) প্রাণ দিয়ে হুঃখসয়ে আপনার হাতে,  
সংগ্রাম করিতে দাও ভাল-মন্দ সাধে ।  
শীর্ণ শাস্ত্র সাধু তব পুত্রদের ধ’রে,  
দাও সবে গৃহছাড়া, লক্ষ্মীছাড়া ক’রে ।

(d) যে বংশে সগর রাজা, রঘুবীর মহাতেজা,  
ভগীরথ বেণ মহাশয় ।

হেন বংশে জনমিয়া, না করি বংশের ক্রিয়া,  
জিনে ঘোরে মূনির তনয় ।

5. Translate any five of the following into Bengali :—

25

(a) Ram kept the pledge of his royal father to Kaikayi and went to exile for 14 years.

(b) When the report came to Job that all his children had died, he was at once on his knees, saying :—'Thou hast given, thou hast taken, blessed be thy name, O Lord.'

(c) It is over-feeding that kills more children than starvation.

(d) Early to bed and early to rise, make a man healthy, wealthy and wise.

(e) Kalidas was one of the 'nine gems' of the court of king Vikramaditya.

(f) Pride often goes before a fall, hence try to be meek and forgiving.

(g) Before coming to office, have a good breakfast, this will keep your temper cool. 'A hungry man is an angry man,' they say.

6. Give the noun forms of the following words :—

10

शिविल, अलस, दीन, मन्द, रसिक, विद्वत्, विद्वत्, अन्न, अन्न and सरल ।

7. Correct all orthographical and other errors in the following passage :— 11

से पथे छुटिते छुटिते उहट मारिया परिया गेल ; यद्यपि आघात सांघातिक हईया छिल ना किन्तु ताहाते ताहार एकटा हात भाजिया बाध्याते से एकैबारे अकर्ण्य हईया परिल । प्रथमतः भाजा छातटा किछुतेहै जोरा लागिते पारा बाध नाई ; सेवे दिर्यकाल एकटा काष्ट हाते बाजिया राखार फले धिरे धिरे हातटा से नाराचारा करिते पारिया छिल ।

## HINDI (FOR MALE CANDIDATES)

*Paper-Setter*—MR. NALINIMOHAN SANYAL, M.A.

*Examiner*—MR. AMBIKA BAJPAI.

### COMPULSORY PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate two of the following passages into English :—

(a) सदीर दलेलखां भी राजा की हमराही में था । इलाहाबाद 10  
के निकट दोनों सेनाओं की मुठभेड़ हुई । सुल्तान शुजा की हार हुई,  
सुलेमान शिकोह ने बड़ी वीरता से इस युद्ध में जय लाभ किया । राजा  
जयसिंह बादशाह की आज्ञानुसार काम कर रहे थे । अपना बल प्रकाश  
नहीं किया, जो कुछ बालक सुलेमान शिकोह ने किया था उसी को बस  
समझा ।

(b) श्ररे यह तो जुस्फो धरे आर्यपुत्र बने हुए हैं, इनकी देह की सुन्दरताई खिलते हुए नील कमल की नाई' कैसी सुन्दर झलक रही है और चाचा अचरज मानकर एकटक आप का रूप देख रहे हैं। यह देखो उन्होंने सहज ही महादेवजी का धनुष तोड़ डाला। 10

(c) सीता-लषन-सहित रघुराई । 10  
गांव निकट जब निकसहिं जाई ॥  
सुनि सब बाल वृद्ध नरनारी ।  
चलहिं तुरत गृहकाज बिसारी ॥  
सजल नयन अति पुलक सरीरा ।  
सब भये मगन देखि दोउ बीरा ॥  
बरनि न जाइ दसा तिन केरी ।  
लही रंक जनु सुर-मनि-डेरी ॥

2. Either, Give a brief description of the charms of Kālākankar. 20

Or, Describe the incidents which led to the marriage of Mīrā Bāī with Rānā Kumbha, as narrated in your text-book. 20

3. Explain two of the following passages :—

(a) तब इराजल जनु मोतिन माला । 10  
फैलत दूटि धरनि तेहि काळा ॥  
मन दृढ़ करि यद्यपि प्रभु रोका ।  
तेहि छन प्रबल क्रोध अरु सोका ॥  
फरकत नाक ओंठ यह जानी ।  
औरहु सके दुःख अनुमानी ॥

(b) पानी बाढ़ो नाब में घर में बाढ़ो दाम । 10  
दोज हाथ उलीचिये यही सयानो काम ॥  
यही सयानो काम नाम ईश्वर को लीजै ।  
पर स्वारथ के काज सीस आगे धरि दीजै ॥  
कह गिरिधर कविराय बड़ेन की यही है बानी ॥  
चलिये चाल सुचाल राखिये अपनो पानी ॥

- (c) सुनि सुनि रीति बिरदैत के बड़प्पन की, 10  
थप्पन उथप्पन की बानि छत्रसाल की ।  
जंग-जीति लेवा तेऊ द्वैकै दामदेवा भूप,  
सेवा लागे करन महेबा महिपाल की ।

4. (a) Write sentences to illustrate the different meanings of *three* of the following words— 6

पतंग, तरणी, हरि, गुण, पक्ष ।

(b) Compose sentences to illustrate the difference between the meanings of each of *three* of the following pairs of words :— 6

कुल and कूल ; कृत and क्रीत ; प्रसाद and प्रासाद ; लक्ष and लक्ष्य ; शुचि and सूची ।

5. Re-write the following correctly :— 8

- (a) वह लड़का मार खाया ।  
(b) रात हो गया, इस लिये आ नहीं सकुंगा ।  
(c) साहब ने बोला कि तुम दोषी है ।  
(d) पिताजी आज मुझे एक रुपया दिये हैं ।  
(e) मैं उनको कहा था कि तुम मत जाओ ।  
(f) आज मुझे बहुत चिट्ठी मिली है ।  
(g) कोई देश में मनुष्य का सब आवश्यक वस्तु नहीं मिलता ।  
(h) कौन आदमी ने यह किताब चुरा लायी है ।

6. Translate the following passage into Hindi :— 10

The plague of London lasted all through the summer. When the cold winds of winter came, it grew less. Then the people who had fled began to return to their homes, and the shops were opened, and pale sad faces were seen in the streets. But the plague did not quite go until a year later. What brought it to an end was a great fire, which burned down many of the dirty houses in London.

7. Write a short essay on *one* of the following subjects :— 10

- (a) Agriculture and industries—suitability of each at present in India.  
(b) How to keep oneself in health.  
(c) How to behave towards our elders.

## HINDI SECOND LANGUAGE FOR MALE CANDIDATES

## ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate any three of the following passages into English :—

24

(a) होनी को कोई मिटा नहीं सकता, किन्तु सब्बे चित्त से उपकार के लिये जो कोई उत्तम उपदेश देता हो, उसपर पदस्थ पुरुष को ध्यान देना उचित है—और जो अपने विचार में भूल हुई हो, तो अपनी भूल को सुधारना चाहिये ।

(b) साईं सुमन परास पर सुआ रह्यो जो आय ।  
लाल कली सी चो'च पर मधुकर बैठ्यो जाय ॥  
मधुकर बैठ्यो जाय सुआ तत् काल वचायो ।  
कोटि कष्ट दुख पाय मधुकर छूटन पायो ॥  
कह गिरिधर कविराय बेग घर वजै बधाई ।  
दीजै बिदा परास जियत घर जैये साईं ॥

(c) कहां लौं कहिये ब्रज की बात ।  
सुनहु स्याम तुम बिन उन लोगन जैसे दिवस विहात ॥  
गोपी गाह ग्वाल गोसुत वै मछिन बदन कृस गात ।  
परम दीन जनु सिसिर हिमाहत अंबुज गत बिन पात ॥

(d) दुर्बल को न सताइये, जाफ़ी मोटी हाय ।  
बिना जीव की सांस से लोह भसम हो जाय ॥  
निन्दक नियरे राखिये आंगन कुटी छायाय ।  
बिन पानी साबुन बिना निर्मल करे सुभाय ॥

(e) गो, इसका सुडौल सांचे में ढला हुआ बदन ऐसा खूबसूरत और मुलायम है कि, अगर इसे देख पाए तो चांद लजा जाए ; पर फिर भी इसके कुम्हलाए हुए जई चेहरे, मुझाई हुई सूजी हुई और डबडबाई हुई सुल्लं आंखें, और फेंकी हुई मैली और लटे' बंधी हुई घुंघरवाली अलके' इस बात का पता दे रही हैं कि, वह नौजवान और हसीन औरत परित्यक्त-पतिका है ।

2. Give briefly the substance of Balmukund Gupta's memories of the agreeableness of Kālākāṅkar. 12

3. (a) Give the meanings of the following words :—

5

मुठभेद, कोतल, सब्ज, कदम, दस्तन्दाज़ी, न्यायाधीश ।

(b) Use five of the following expressions in sentences of your own :—

5

मन की कली खिलाना, नित दून को लेना, वट्टा लगाना, वाहि ग्राहि करना, कमर बांधना, मात करना, मरे को दुबारा हलाक करना, किसी फेले से बाज़ रहना, किसी की हमराही होना ।

(c) Write sentences to bring out the genders of five of the following words :—

5

बर्ताव, आंसू, शरवत, तम्बाकू, वैठक, सन्तान, समाज, विधि, देवता, आत्मा ।

4. Rewrite the following correctly :—

13

- (1) हम कल बनारस से आया है ।
- (2) राम का घर में आजकल कोई आदमी नहीं है ।
- (3) वह आदमियों ने राम को कल बहुत मारा था ।
- (4) हम राम को पूछा कि तुम कैसा है ?
- (5) मास्टर साहब आज मुझे यहां आने को कहे थे ।
- (6) आज बहुत गर्मी है, चलो बाग का ठंडा हवा खा आउं ।
- (7) राम की मां दस रुपये भेजी है ।
- (8) आज सबेरे मैं चार गरम जलेबी खाये थे ।

5. Translate into English :—

16

सूरदास कौन था ? कहां का रहनेवाला था ? उसका असली नाम क्या था ? यह किसीको भी मालूम न था, न वह अपना असली हाल किसी को सुनाता था । अगर कोई पूछता, तो उत्तर देता—“मैया, पापी जीव हूँ, हाल क्या सुनाउं ? गंगा मैया की शरण आ पड़ा हूँ ; मेरा प्राण निकल जाय, तो राम का नाम लेकर देह को बहा देना ।” इससे अधिक बातचीत वह अपने सम्बन्ध में न करता था । प्रातःकाल चार बजे उठता और तम्बूरा लेकर बैठ जाता था । तम्बूरा बजाता था और हरि भजन गाता था ।

6. Translate into Hindi :—

20

A king in the East was once in great need of a servant whom he could trust. After thinking for a long time, he made a plan by which he thought he could get one. He let it be known in the city that he wanted some one to do a day's work for him. Two men soon came, and said they were ready to do the work. So the king told them what wages they would have for working the whole day, and then gave each of them a basket. Each man was to take his basket to a well in the palace garden, and fill it with water.



## URDU (FOR MALE CANDIDATES)

## COMPULSORY PAPER

Paper-Setters—{ MAULVI EKRAMUL HAQUE.  
 „ MAHFUZUL HAQ, M.A.  
 „ MD. YUSUF.

Examiner—KHAN BAHADUR REZA ALI WAHSHAT.

Candidates are required to give their answers in their own words  
 as far as practicable.

The figures in the margin indicate full marks.

1. Translate into English either (a) or (b) :—

24

(a) ایک دن اُس لڑکے کی بڑی بہن ٹوپی خریدنے  
 نیوکاسل کو چلی۔ لڑکا بہن کے ساتھ ہو گیا۔ بہت جستجو کے  
 بعد لڑکی کو ایک ٹوپی پسند آئی۔ قیمت پوچھی  
 تو اکتیس روپے آئے۔ بھلا اس بیچاری کے پاس اتنے دام  
 کہاں؟ دکان دار سے کمی قیمت کی خواہش کی مگر بے سود۔  
 ناچار اگے بڑھی۔ پر کہیں خاطرخواہ ٹوپی نہ پائی۔  
 پھر واپس آئی اور حسرت بھری نگاہوں سے اُس ٹوپی  
 کو تکتے لگی \*

(b) ہمایوں نے دو برس کے بعد شاہ ایران کی کمک  
 سے افغانستان کو فتح کیا۔ اُس وقت مان باپ نے اکبر  
 کو پھر دیکھا جس کی عمر اب دو سال نو مہینے آٹھ  
 دن کی ہو گئی تھی۔ اسی اثنا میں کامران کابل پر دو  
 بارہ قابض ہو گیا۔ جب ہمایوں نے محاصرہ کر کے قلعہ  
 پر گولہ باری کا حکم دیا تو سنگ دل مرزا نے معصوم  
 بھتیجے کو سرورچہ پر لا بٹھایا جہاں گولے گولیوں کی  
 برچھار ہو رہی تھی \*

2. (a) Give an account of the life of either جارج اسٹیفنس or 10  
 شیر شاہ سوری as given in Sowd-i-Urdū.

(b) Narrate the story of the two brothers who went to America in search of gold. 10

(c) Explain the following verses :— 6

کیوں نہ درختوں میں ہر وہ سر بلند  
اُس کا ہے پھل شاہ رگدا کر پسند  
ہند کے میروں کا رہ سردار ہے  
رنق ہر کوچہ و بازار ہے

3. (a) Give the plurals of :— 8

گھوڑا - گاڑی - مکان - روٹی - آنکھ - دعا - سرائی -  
جوہر -

(b) Re-write the following, after correcting the mistakes :— 10

سب لوگ اپنا گھر گیا - آپ گھر جاؤ - میں کھانا  
کھائے - ہم وہاں نہیں جائے گا - تم کیا مانگتا ہے \*

(c) Give the genders of any seven of the following :— 7

عمر - سن - دریا - شربت - عقل - نام - سلطنت -  
سورج - شام - مجلس \*

4. Translate into Urdu :— 25

- My teacher is absent to-day.
- Akbar was born at Amarkot in 949 Hijra.
- I saw a saint who had a book in his hand.
- I can talk in Urdu.
- I am glad to see you in my house.
- Why are you late?

### ADDITIONAL PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English :— 10

ہارچ چودہ برس کا ہوا تو اپنا آبائی پیشہ اختیار  
کیا یعنی کان کے اندر کوئلہ کھودنے لگا، جس کی مزدوری  
اٹھہ آنے فی یوم تھی - شراب خواری اور کھیل تماشوں سے  
اُسے سخت نفرت تھی - ابھی تک وہ بعض ناخوالہ تھا -

مگر علم و فن کا ایسا شائق کہ اپنے مسکن سے چار میل کے فاصلے پر بترے میاں کے پاس حساب سیکھنے جاتا \*

2. Either, Narrate the story of نواز نندہ and باز نندہ as given in 10  
Sawād-i-Urdū.

Or, Give an account of the life of اہلیا بائی.

3. Translate into English :—

30

(Unseen)

میں افریقہ کا رہنے والا ہوں۔ شہر نیروبی میں پیدا  
ہوا تھا۔ اس وقت میری عمر تیرہ سال ہے۔ میرے والد  
گجرات کے رہنے والے ہیں۔ میں نے اردو اپنی والدہ سے  
سیکھی۔ ایک مہینہ ہوا کہ میں سورت آیا ہوں۔ میرے  
والد نے مجھے ”بچوں کا اخبار“ لاکر دیا۔ میں نے اس کو  
شروع سے اخیر تک پڑھا۔ مجھے بہت پسند آیا۔ میرا دل چاہا  
کہ میں افریقہ کا حال لکھ کر بھیجوں۔ والد سے پوچھا۔  
انہوں نے کہا ”ضرور لکھو۔ یہاں کے لڑکے افریقہ کا حال  
نہیں جانتے۔ کہ وہ کیسا ملک ہے۔ لوگ کیسے ہیں۔ ان کا  
مذہب کیا ہے؟“ والد صاحب کے کہنے سے مجھے ہمت ہوئی۔  
میں نے وہاں کا حال لکھا۔ ان کو دکھایا۔ وہ بہت خوش  
ہوئے۔ اور میری ہمت بڑھائی \*

4. (a) Re-write the following, after correcting the mistakes :—

12

مجھ کو تمہاری بات پر ہنسی آتا ہے۔ لڑکا لوگ بہت  
شرارتی کرتا ہے۔ آج کل گرمی بہت پڑتا ہے۔ ہم کل سے  
بہت پریشان ہے۔ ہم آج اسکول نہیں جائے گا۔ ہمارا  
مولوی صاحب بیمار ہے۔ میں نے آپ سے کہے لیکن آپ میرا  
بات نہیں مانے \*

(b) Either, Define and give examples of the following :—

8

اسم اشارہ - مضای - مضای الیہ - ماضی مطلق

Or, Indicate the genders of :—

بات - جی - دنیا - کتاب - کاغذ - دن - رات - جہان

(c) Fill up the blanks :—

5

میں — یہ بات کہبراهت میں کہی \* تم سو پہر —  
وقت آؤ \* رہ گھوڑے — سرار ہو کر روانہ ہو گیا \* معصوم  
— بلی خوبصورت ہے \* اس مرتی — قیمت کیا ہے ؟

5. Translate into Urdu :—

25

A thief made a hole in a wall. He was caught and brought before the king. He said, 'O king! It was my right hand that made the hole. I lay outside the wall. I did not go in.' The king said, 'your right hand must go to prison for five years. You should stay outside the gaol.'

## BURMESE (FOR MALE CANDIDATES)

### COMPULSORY PAPER

*Paper-setter and Examiner—MAUNG WE LIN*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

I အောင်ပေါက်လို့ အင်္ဂလိပ်လို 10  
အမိဗွာမိဇာနည်ပါ။  
(သို့မဟုတ် အမိဗွာမိဇာနည်၊  
ဖျက်သစ် သင့်စားဖြင့် ဖြစ်  
၇၇: နှို ဖျက်သစ် လှ: နှိုသစ်)

မွေးလှကြိုင်လန်း။ မေတ္တာပန်းကို။ ဦးစွန်းထိပ်စွန်း။ ဆင်ခွဲပန်  
မှ။ ပွဲရန်သဘင်။ ဒေါသစင်လည်း။ အောင်မြင်စေလော့။ သ  
ပြေဆွတ်ခွန်။ ရွှေမင်းဝံ တောင်။ ကျွန်းညွန့် သောင်ထက်။  
ဆောင်ဆောင် ရွှေနန်း။ မြင်းမိုရ်ထွန်းသူ။ သွန်းသွန်းရောင်  
ဟုံ။ မျက်ကိုးစုံနှင့်။ မိုင်းအုံနတ်ကူ။ ထည်တော်မူသည်။ ဆင်  
မြန်မာ။ ဆဋ္ဌန္တလည်း။ နတ်သမက်အောက်။ လစဉ်  
နတ်လောက်ကညာ။ တိုင်းအတည်တည်။ ပြည်အစို  
တိုင်းတိုက်။ ဆက်ပိုနိယံ။ သစ္စာနံ့။ ကျွန်ခံလှသည်။ ။  
ရတနာပူရ။ သားတော်မြေးမြစ်။ ညွန့်သစ်စည်ပင်။ ရာဇဝင်  
အခေါင်။ တပေါင် ကြွေးဟစ်။ ထွန်းရာဖြစ်သည်။ အောင်  
သေဋ္ဌတု။ ။ ရွှေဝပြည်ကို။ ပြည်ပြည်တိုင်းနောင်။ အုပ်စိုး  
ဆောင်ရသည်။ ပွင့်ရောင်ညိုကို။ မြင့်ချီးမြှောက်တင်။ ဤစာ

၇၇၂ ဒက်ရှင် လက်ဖြင့် ဂျီလဟာ လက်ဖြင့်  
ဖြင့် ရှောင်ဖြတ်စွာ ဂျီလဟာ သည် ဝေပိုင်သို့ ရောက်  
လက်ဖြင့် လောင်း လက်ဖြင့် သတင်း။ 14

အင်္ဂလိပ်အစိုးရက ဖြစ်တော့မင်း၊ ဆံ့ ငွေ  
ငွေတင်း သည် အငွေတင်း ဂျီလဟာ လက်ဖြင့်  
လက်ဖြင့် ဆုံး ဝေပိုင် သည် အစိုးရ ဂျီလဟာ  
စွာ ဂျီလဟာ။ 13

IV မဟာဗုဒ္ဓ သမာဓိ သည် ဂျီလဟာ လက်ဖြင့်  
ဝေပိုင်သို့ ရောက် လက်ဖြင့် ဂျီလဟာ။

V (က) စကား ဂျီလဟာ ဝေပိုင်သို့ ရောက် အစိုးရ  
ဂျီလဟာ သည် ဂျီလဟာ လက်ဖြင့် ဂျီလဟာ။ 25

(ခ) ဂျီလဟာ သည် ဂျီလဟာ လက်ဖြင့် အစိုးရ  
ဂျီလဟာ စွာ ဂျီလဟာ ဂျီလဟာ ဂျီလဟာ

(ဂ) မဟာဗုဒ္ဓ စကား သည် ဂျီလဟာ လက်ဖြင့်  
စကား ဂျီလဟာ လက်ဖြင့် ဂျီလဟာ  
သို့ ဂျီလဟာ မဟာဗုဒ္ဓ ဂျီလဟာ  
ဂျီလဟာ သည် ဂျီလဟာ လက်ဖြင့်  
အစိုးရ ရှောင်ဖြတ်သို့ ဂျီလဟာ

(ဃ) အစိုးရ ဂျီလဟာ စကား သည် အစိုးရ  
သို့ ဂျီလဟာ လက်ဖြင့် ဂျီလဟာ  
သို့ ဂျီလဟာ။

လက်ဖြင့် မဟာဗုဒ္ဓ

၁၉၀၈ ခုနှစ် ဖေဖော်ဝါရီလ ၁၀ ရက်နေ့

25

အိမ်ရှေ့မင်းမယ်တော်သည်လည်း။ တောဝှမ်းပြန့်လည်၍လည်း။ ခရီးအစဉ်အတိုင်းပြန်သွားသဖြင့်။ ရန်သူ  
 ရောက်သောအခါ။ လေသွားနှင့်ဘုရားအလောင်းစကားပြောရာအရပ်၌စေတီတဆူ။ သတ္တိသို့နှင့် ဘုရားလောင်းစကား  
 ပြောရာအရပ်၌စေတီတဆူ။ သံသကအမဲကင်ကိုတည်းပေးတော်မူရာအရပ်၌စေတီတဆူ။ ကိုရန်သူတို့စေတီသုံးဆူသည်၌။ ပန်း  
 နံ့သာသည်တို့ဖြင့်။ ခုနစ်လျက်ပြန်လာလတ်သော်။ ခရီးအစဉ်အတိုင်း။ မဂ်ဗိဇ္ဇာရှင်သောတော်မူရာတော်မူရာ၌  
 စေတီတဆူ။ ရာဇဂြိုဟ်သောတော်မူရာတော်မူရာ၌စေတီတဆူ။ ကိုရန်သူတို့စေတီတဆူ။ ပုဏ္ဏားလောင်း  
 တော်မူရာတော်ဖြင့်။ ခရီးမတွင်။ ဗီလာဗြတ်အရေးသားတော်မူရာ၌စေတီတဆူ။ မိလိလာပြည်သို့ရောက်လျှင်။ လူသီး  
 လူပျက်မိုးသုဏ္ဍာန်ကြောင့်။ ကိစ္စကပ်ကပ်ရာ၌စေတီတဆူ။ ဗီလောဘကြောင်းကိုလျှောက်ရာ  
 တွင်း၌စေတီတဆူ။ တည်ထားစေ၍။ ပန်းနံ့သာသည်တို့ဖြင့်ပူဇော်လျက်။ မိလိလာပြည်သို့ရောက်လေ၏။ ထိုသို့စေတီတော်  
 များကိုပူဇော်ကိုးကွယ်ခြင်းပုံသဘင်ပြုပြီးသော်။ အိမ်ရှေ့မင်းမယ်တော်သည်။ မြို့ကိုတန်ဆာဆင်စေသော။ မွေးမတ်မိုလိပ်  
 စစ်အင်္ဂါအပေါင်းခြံရံ၍။ အိမ်ရှေ့မင်းနှင့်တကွ။ ယျာဉ်သို့ထွက်ပြီးလျှင်။ ထိုဥယျာဉ်မင်္ဂလာကျောက်စာအဖြစ်၌။ အိမ်ရှေ့မင်း  
 ကိုနေ့စလျက်ရာဇာသီကဏ္ဍအဘိသိက်ဖြင့်။ အဘိသိက်သွန်း၍။ မတ်စပ်သည်စိုလှပသောလှံအရင်းနှင့်တကွ။ ပြည်စည်း  
 င်းလေ၏။



တံ၊ စာ၊ ထွာ။ ဂျိတ်က ဆွဲ၍၇၆။ လယ်  
ဝွတ်က မိစ၊ ခွင်း၊ ဆွဲ၍၇၆။ ငင်း။ လှ  
ဝင်ပု ခုတ် ခွင်း၊ ငယ် ခွင်းလေး။  
မီး၊ ငေါင် ခွင်း၊ ငယ်၊ ခွင်း ၆  
ဂျိတ် ဝယ်။ ၁၇ ဖြစ်က လှေက ချ  
သလွယ်။ ဟင်း ခွတ်က မိ ခွတ်  
စာ ခွတ်က ခွတ်။ ချား ပုတ်က မိတ်  
ပုံ အလုံး ခွတ်။ ချား ငွေက လှေ  
မြို့ မီး ခွတ် ခွတ်၊ လေး။





## BENGALI TEXT

(For Female Candidates)

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## COMPULSORY PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate any two of the following passages into English :—

18

(a) যে নারী প্রিয়জনদিগের আদরভাজন হইয়াও বিপদে স্বামি-সেবায় পরাশ্রুত হয়, সে ইহলোকে অসত্য বলিয়া পরিগণিত হইয়া থাকে। এইরূপ অসত্যদিগের স্বভাব এই যে, উহারা স্বামীর সম্পদের সময়ে স্বেচ্ছাভোগ করে, এবং বিপদ উপস্থিত হইলে, তাঁহাকে নানাদোষে দূষিত, অধিক কি, পরিত্যাগও করিয়া থাকে। এই সকল জীলোক অত্যন্ত অস্থিরচিত্ত; উহারা কুলের অপেক্ষা রাখে না, বসন-ভূষণে বশীভূত হয় না, কৃতঘ্ন হয়, ধর্মজ্ঞান তুচ্ছ বিবেচনা করে, এবং দোষ প্রদর্শন করিলেও অস্বীকার করিয়া থাকে।

(b) মনের মলা দূর না করিলে ভক্তি ও ধর্ম-বিশ্বাসের শাস্তি পাওয়া যাইবে না। তিনি হৃদয়ের ধন, অনেক কষ্ট সহিয়া একাগ্র হইয়া তাঁহাকে পাইতে হয়, নিজের ভোগস্বখের পথে সংঘর্ষের কাঁটার বেড়া দিয়া তাঁহাকে পাইতে হয়। মন একাগ্র না হইলে তাঁহার পায়ের নুপুরের শব্দ শোনা যায় না। কিন্তু তিনি রোজই আসেন, মুহূর্ত্তে মুহূর্ত্তে আসেন, তাঁহার স্নেহের শিশুরা কি করিতেছে তাহা দেখিতে আসেন। তাহারা যদি নিজ স্বখের ও স্বার্থের তুলি পরিয়া চক্ষু আধার করিয়া রাখে, তবে তাঁহার পাদপদ্ম দেখিবে কিরূপে ?

(c) সেখানে যাইয়া তিনি যে দৃশ্য অবলোকন করিলেন, তাহা অবর্ণনীয় ও অননুমেয়। তিনি দেখিলেন, একটি সঙ্কীর্ণ অন্ধকারময় গহবরে দশ পনরটি শিশু যেষের স্রায় আবদ্ধ রহিয়াছে। রোগে ও অনাহারে তাহাদের দেহ কঙ্কালসার। এইরূপ অনাদৃত অবস্থায় চিকিৎসা ও শুশ্রূষার অভাবে তাহারা দারুণ যন্ত্রণায় ছট্ ফট্ করিতেছে। এই শোচনীয় দৃশ্য দেখিয়া তিনি আর তথায় মুহূর্ত্তকালও নিশ্চেষ্টভাবে দাঁড়াইয়া থাকিতে পারিলেন না। তৎক্ষণাৎ তিনি তাঁহার চিকিৎসকের গৃহাভিমুখে ধাবিত হইলেন।

2. Explain any two of the following passages with reference to the context :— 15

(a) তোমা সম আর কি লো আছে এ জগতে ?

মরুভূমে প্রবাহিণী যোর পক্ষে তুমি,  
রক্ষোবধু ! সুশীতল ছায়া-রূপ ধরি,  
তপন-তাপিতা আমি, জুড়ালে আমারে !  
মুষ্টিমতী দয়া তুমি এ নির্দয় দেশে !  
এ পঙ্কিল জলে পদ্ম ! ভূজঙ্গিনী-রূপী  
এ কাল কনক-লঙ্কা-শিরে শিরোমণি !

(b) বীর আর কে আছে এ পুরে

বীরযোনি ? কোথা, সতি, ত্রিভুবন-জয়ী  
যোধ যত, দেখ চেয়ে সাগরের কূলে,  
শবাহারী জন্তু-পুঞ্জ ভুঞ্জিছে উল্লাসে  
শবরাশি । কান দিয়া শুন, ঘরে ঘরে  
কাদিছে বিধবা বধু । আন্ত পোহাইবে  
এ দুঃখ-শরীরী তব ! ফলিবে কহিনু,  
স্বপ্ন ! বিদ্যাদারী-দল মন্দারের দামে  
ও বরাজ রঙ্গে আসি আল সাজাইবে ।

(c) ভারত-কিরণে জগতে কিরণ,  
ভারত-জীবনে জগত-জীবন,  
আছিল যখন শাস্ত্র-আলোচন,  
আছিল যখন যত্ন-দরশন—  
ভারতের বেদ, ভারতের কথা,  
ভারতের বিধি, ভারতের প্রথা,  
খুঁজিত সকলে, পূজিত সকলে,  
ঐগিক, সিরীয়, যুনানী মণ্ডলে,  
ভাবিত অমূল্য মালিক বণা ।

3. Attempt any one of the following :—

10

(a) What measures were taken by বিদ্যাসাগর to spread education in Bengal?

(b) Compare the character of সীতা with that of চিত্তা ।

(c) What was the political condition of India at the time of পৃথ্বীরাজ ?

4. Correct the errors in the following :—

10

ব্যবসায়ের বাবদীয় কর্তব্য আমাকে একা করিতে হয় বলিয়া এমন  
সাবকাশ নাই যে সন্ধ্যায় একটু বায়ু পান করিতে যাই। কেহ  
সাহায্য করিবার থাকিলে নিশিকালেও কিছু অবসর পাইতাম। আমার

পূজ্যাম্পদ দাদামহাসয়ের উপদেশে যতপিশ্তাৎ মাতা স্বরস্বতীর আরাধনা করিতাম তাহা হইলে এ শব্দট হইত না।

5. Form sentences with the following groups of words so as to distinguish the differences of meanings :— 5

বিনা, বীণা ; মুখ, মুক ; লক্ষ, লক্ষ্য ; দিন, দীন ; দীপ, দীপ ।

6. (a) Combine into a single sentence :— 5

আবু পরম ধার্মিক ছিলেন। একদা গভীর নিশীথে নিজা হইতে উখিত হইলেন। তাঁহার গৃহ চন্দ্রালোকে উদ্ভাসিত হইয়াছে। গৃহমধ্যে এক রমণীকে পুস্তকে লিখিতে দেখিলেন। যে রমণীর ছায় সুন্দরী সচরাচর দেখিতে পাওয়া যায় না। তাহার চুলগুলি ভ্রমরের ছায় কৃষ্ণ।

(b) Distinguish between 'sandhi' and 'samāsa.' Name and give examples of four kinds of 'samāsas.' 7

(c) Substitute single words for the following :— 5

দয়া নাই বাহার। বাহার তৃণ ভক্ষণ করে। যত দিন মৃত্যু না হইবে। যত দিন জীবিত থাকিব। যে পক্ষত হইতে অধ্যুৎপাত হয়।

7. Translate any two of the following extracts :— 25

(a) মিষ্ট কথা বলিবার জ্ঞান কিছু ব্যয় হয় না, কিন্তু অনেক অর্থব্যয় করিয়াও বাহা করিতে পারা যায় না, দশটা মিষ্ট কথায় তাহা সাধিত হয়। মিষ্ট কথা যিনি বলেন, যিনি তাহা শ্রবণ করেন, উভয়ের হৃদয় শান্তভাবে পরিপ্লুত হয়, প্রাণ যেন আনন্দে ভাসিতে থাকে, অন্তর পবিত্রভাবে পূর্ণ হয়। মিষ্ট কথা যিনি বলেন তাঁহার হৃদয় মধুর হয়, যিনি শুনে তাঁহারও হৃদয় মধুর হয়, যেখানে মিষ্ট কথা উচ্চারিত হয়, সেখানকার বায়ু মধুময় হয়। একটা মিষ্টভাষী লোক শত লোকের সুখের কারণ হয়। দুঃখ, শোক, বিপদ, অবসাদ দূর করিবার জ্ঞান মিষ্ট কথার কার্যকারিতা আমরা যেন বিস্মৃত না হই। মিষ্ট কথার উৎপত্তিস্থল প্রেম, স্নেহ ও দয়া।

(b) মনুষ্য যে পর্যাস্ত কার্যে প্রবৃত্ত না হয়, সে পর্যাস্ত তাহার হৃদয় সম্যাকরূপে পরিষ্কৃত হয় না। পরিশ্রমের অগ্নি হৃদয়ে জলিয়া উঠিলে অস্ত্র সকল কুপ্রবৃত্তি ভস্মে পরিণত হয়। যখন আমরা অলস হইয়া থাকি তখনই আমরা যত প্রকার পর-নিন্দা, বৃথা গল্প, ইত্যাদি অজ্ঞায় কার্য করিয়া থাকি! আলস্তকে দূর করিতে পারিলে জীবনের ভাবী উন্নতি সহজে সম্পন্ন হয়। আলস্তই আমাদের প্রধান ব্যাধি এবং ইহাই আমাদের বাবতীয় দুর্বলতার মূল। আলস্ত পরনিন্দা-পরায়ণতার জনক। অনলস কর্মবীরের পরচর্চা করিবার অবসর কোথায়? পক্ষান্তরে বাহার কোনই কর্ম নাই, যে শুদ্ধ পরনিন্দা করিয়াই ক্ষান্ত হয় না, তাহাকে আত্ম-প্রশংসা স্বরূপ মহাপাপে লিপ্ত হইতে দেখা যায়। দুঃখের বিষয়, আত্মপ্রশংসারূপ অপরাধে আমরা

অনেকেই অপরাধী ; আত্মপ্ৰাণা যে পৰনিন্দা অপেক্ষাও বৃণা তাহা আমাদেৱ সকল সময়ে স্মৰণ থাকে না।

(c) ছুৰ্ভিক্ষেৰ দৃশ্য অতি ভয়ানক। দেখা গিয়াছে, ছুৰ্ভিক্ষেৰ সময়ে হঠাৎ কিছু খাবাৰ পাইলে, জননী পেটেৰ জ্বালায় আপন শিশু সন্তানকে ঠেলিয়া ফেলিয়া, গোপ্ৰাসে তাহা ভক্ষণ কৰিতেছে। শূন্য বায়, বিগত উড়িষ্যাৰ ছুৰ্ভিক্ষে এক প্ৰস্থিতি তাহাৰ দুইটি শিশু পুত্ৰ সহ কয়েক দিন অনাহাৰে ছিল। একদিন হঠাৎ তাহাৰা কিছু খাবাৰ পাইল। তাহাৰা দেখিল, সে খাওে তাহাদেৱ একটীয়াও ক্ষুধা নিবৃত্ত হইবে না। তখন তাহাৰা সেই খাও সন্মুখে রাখিয়া ভাবিতে লাগিল, দরিদ্ৰাৰ বড় ছেলেটি কিছু বুদ্ধিমান ছিল। সে মাকে অত্যন্ত বৃত্তিকিত দেখিয়া বলিল, মা, তোমৰা দুইজনো এগুলি খাও, আমি তোমাদেৱ ত্ৰায় ক্ষুধায় কাতৰ হই নাই। তাহাৰ কথায় মা ও তাহাব ছোট ভাই সেই অন্ন খাইতে লাগিল। তাহাদেৱ খাওয়া শেষ হইলে, কিয়ৎকণ পৰে বড় ছেলেটি মৰিয়া গেল।

## ASSAMESE TEXT (FOR FEMALE CANDIDATES)

### COMPULSORY PAPER

*Paper-Setters*—{SRIJUT SCRYYAKUMAR BHUIYAN.  
MR. BANIKANTA KAKATI, M.A.

*Examiner*—MR. ATAUR RAHAMAN.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write briefly what you know of one of the following :— 12  
Diogenes, Sultan Ghiyathuddin, Lord Nelson, Kaliabomora Barphukan, Anandaram Dhekial Phukan.
2. Either, Name the books written by Hemchandra Barua, and write a short account of any one of them. 12  
Or, Write a brief sketch of the life of Hemchandra Barua, basing it on his autobiography.
3. Either, Which is your most favourite poem in *Anjali*? State the reasons for your preference. 12  
Or, Give the substance either of ভাবত জননী, or of হেবোৱা লাহৌ।
4. Translate into English one of the following passages :— 16  
(a) কুমাৰী ভিক্টোৰীয়া সৰুৰে পৰা অতি দয়াবতী, ক্ৰমান্বীলা, সত্যপ্ৰিয়া আৰু ধৰ্ম্মিষ্ঠা আছিল। গুণবতী মাতৃৰ যত্নত খৃষ্টান ধৰ্ম্মৰ পবিত্ৰ ধৰ্ম্মপুথি বাইবেল শিক্ষা কৰি তেওঁ জীৱনপ্ৰেমত বৰ অমুৰস্তা হৈ উঠিছিল। বয়সৰ লগে লগে ভিক্টোৰীয়াৰ পবিত্ৰ ধৰ্ম্মভাৱ উজ্জলতৰ জেউতিৰে জিলিকি আহিবলৈ ধৰিলে। আৰু তেওঁৰ জীৱন-ভক্তি তেওঁৰ ৰাজ্যত এটি পবিত্ৰ পটন্তৰ হৈ জিলিকি উঠিল।

(৬) ঈশ্বৰৰ ইচ্ছান আজি-কালি আমি দুখানি-এখানি ন-ন পুথিৰ মুখ দেখিবলৈ ধৰিছোঁ। আমাৰ ভাষাৰ যেনে শিশু অৱস্থা পুথি কৰা লোকসকলৰো পুথি লিখাৰ শিশু অৱস্থা। যদি ভাল গুণাগুণ বিচাৰ নহয় তেনেহলে গ্ৰন্থকাৰ সকল স্বেচ্ছাচাৰী হবৰ সম্ভাৱনা। নিজে নিজে পাৰ্গত ভবা দোষ-যুক্ত। আপোনাৰ মুখ আপুনি যেনেটক নেদেখি সেইদৰে আপোনাৰ দোষো তেনেটক নেদেখি। এতেকে এজন দোষ-গুণ দেখাই দিয়া লোকৰ নিতান্ত প্ৰয়োজন।

5. Explain with reference to the context *two* of the following  $2 \times 6 = 12$  passages :—

(a) প্ৰিয়বদা অনন্থয়া দুয়ো গোট খাই  
হাতত কলহ লই ফুলৰ তলত,  
চালিছেহি পানী চোৱাঁ সাক্ষাত আগতে,  
আলমুৱা শকুন্তলা আছে ওচৰত।

(b) মই আলেক্জেণ্ডাৰ নহলোহেঁতেন যদি, ডায়জিনিচ হবলৈ  
বাঞ্ছা কৰিলোহেঁতেন।

(c) কেপা কানি বিহৰ শেষ,  
কানীয়াৰ নাই জ্ঞানৰ লেশ;  
হাঁয় হাঁয় কি ঘোৰ ক্লেশ,  
কানীয়াই খালে অসম দেশ।

6 Translate *one* of the following passages into English :—

16

(a) গৃহস্থালিৰ ঈজুলিৰ ভিতৰত দুটি বস্তু প্ৰধান,—অন্ন আৰু বস্ত্ৰ। বস্ত্ৰ বা কাপোৰ বোৱাত পৃথিবীৰ ভিতৰত অসমীয়া তিবোতাৰ নিচিনা কোনো পাৰ্গত নহয়। ভাৰতত অত্যাচাৰ জাতিৰ ভিতৰত তাঁতি বুলি এক শ্ৰেণীৰ মানুহ আছে। সেই জাতিৰ মানুহে সেই তাঁতি জাতৰ মানুহৰ ওপৰত বস্ত্ৰৰ কাৰণে নিৰ্ভৰ কৰে; আৰু সেই সমাজত তাঁতিৰ বাহিৰে অত্যাচাৰ মানুহে কাপোৰ বোৱাটো বৰ গৰ্হিত কাম। কিন্তু অসমীয়াৰ ভিতৰত জাতিকুল নিৰ্বিশেষে সকলো তিবোতাই কাপোৰ ব'ব পাৰে; আৰু যি ছোৱালী কাপোৰ বোৱাত পাকৈত নহয় তেনে ছোৱালীৰ ভালৰূপে বিয়া হোৱাটো অসম্ভৱ হৈ পৰে।

(b) আৰববাসী অতিথি-সংকাৰৰ নিমিত্তে গোটেই পৃথিবীত জনাজাত। কোনো অতিথি আহি কাৰো ঘৰৰ পৰা এনেদৰে উভতি যোৱাৰ নিয়ম নাই। কোনো কোনোৱে ঘৰত আলহি-পতিথিৰ ভবি ধুৱাবলৈ নেপাৰমানো ভাতৰ পাতত নবহিছিল। সেই মৰমিয়াল আৰববাসীয়ে অনাধীনী আজলী বাবিয়াৰ কোনো সংস্থান নকৰাকৈ নেধাকিল। প্ৰজি আৰব গৃহস্থই তেওঁক এদিন-এদিনকৈ পাল পাতি ধুৱাবলৈ পাত ললে; কাৰণ তেওঁলোকোৰ নিজৰ অৱস্থাও ইমান ভাল



3. Translate into English one poetical and one prose passage from the following :— 25

(a) देखि बुद्धि-बल-निपुन कपि, कहेउ जानकी जाहु ।  
 रघु-पति-चरन हृदय धरि, तात मधुर फल खाहु ॥  
 चलेउ नाइ सिरु पैठउ बागा ।  
 फल खायेसि तरु तोरइ लागा ।  
 रहे तहाँ बहु भट रखवारे ।  
 कछु मारेसि कछु जाइ पुकारे ।  
 नाथ एक आवा कपि भारी ।  
 तेहि असोक-बाटिका उजारी ।  
 खायेसि फल अरु विटप उपारे ।  
 रच्छक मर्दि मर्दि महि डारे ।

(b) आपुहि सुनि खद्योत-सम, रामहिँ भानु-समान ।  
 परुष बचन सुनि काढ़ि असि, बोला अति खिसियान ॥  
 सीता तैँ मम कृत अपमाना ।  
 कटिहउँ तव सिर कटिन कृपाना ।  
 नाहि त सपदि मानु मम बानी ।  
 सुमुखि होत न त जीवन-हानी ।  
 स्याम-सरोज-दाम-सम सुंदर ।  
 प्रभु-भुज करि-कर-सम दसकंधर ।  
 सो भुज कंठ कि तव असि घोरा ।  
 सुनु सठ अस प्रमान-पन मोरा ।

(c) ये छहों महात्मा भिक्षा ग्रहण करते हुए कई दिनों में गया पहुँचे। वहाँ गौतम ने सोचा कि सबसे पहले शारीरिक शुद्धता के लिए तपस्या करना आवश्यक है; क्योंकि बिना इसके चित्त शुद्ध नहीं हो सकता। इस विचार से वे तपश्चर्या के योग्य स्थान ढूँढ़ने लगे; और वहाँ से थोड़ी दूर पर उरुबिल्व नामक ग्राम में निरंजना नदी के किनारे एक उपयुक्त स्थान पाकर वहीं घोर तपश्चर्या में लीन हो गए।

(d) शिवाजी को भवानी का ध्यान करने से यह दृढ़ निश्चय हो गया कि अफजलख़ाँ से युद्ध करने में स्वयं भवानी उनकी रक्षा



करेगी। उन्होंने एक दिन स्वप्न में भी देखा कि तुलजापुर में तोड़े गए भवानी के मंदिर का बदला लेने के लिये भवानी ने उन्हें आदेश दिया है। अतः मरहटे सरदारों को एक पंचायत में युद्ध ठानने का निश्चय हुआ। इस कार्य में उन्होंने अपनी माता श्रीमती जीजाबाई की सलाह ली तो उन्होंने आशीर्वाद दिया कि “जा बेटा, तेरी विजय होगी।”

4. Make sentences using five of the following expressions :—

5

मनसूबा बांधना, धाक बैठाना, सिक्का जमाना, लीन हो जाना, आँखों पर परदा पड़ना, सूखकर कांटा हो जाना, कुछ उठा न रखना, अपना लेना, जालमें फँसना and जीमें जो आना।

5. (a) Give the opposite genders of any five of the following :—

5

सास, भाई, देवर, भगिना, नाती, विद्यार्थी, छाल, बिल्ली, चूहा, and बछिया।

(b) When is the nominative in Hindi used with ने ?

5

6. Either, Decline चिट्ठिया or वस्तु in both numbers in the nominative, objective and possessive cases.

5

Or, Conjugate the v-erb चलना in the feminine third person singular in all the forms of the past tense

5

7. Correct all errors in any five of the following sentences :—

10

(a) मैं मेरे भाईको देखनेको जाती हूँ।

(b) यह कड़कीने दही गिरा दी।

(c) वह नौकरने हाँ ना कुछ न बोला।

(d) बालिकाओं, मन देकर पढ़ो।

(e) वह हरेक कामों से भागती है।

(f) वह कौन आदमिकी कड़की है।

(g) मेरा पिताजी यह किताब पढ़े थे।

(h) वह एतना उन्नति कर ली जिसका हह नहीं।

8. Translate any two of the following passages into English :—

25

(a) आनंदमयी देवी की एक विदुषी हुआ थी, उन्हीं का नाम गंगामणि था। छोटी-छोटी कविता और विवाह के समय गाने कायक अनेक सुंदर सुंदर गान इन्होंने रचे हैं। बहुत दिन तक बंगालियों के यहाँ खिया इनके बनाए गीत गाती रही हैं। इस नवीन रुचि के जमाने में भी दो एक बुढ़ी औरतों के मुँह से इनके

बनाए गीत सुन पड़ते हैं। इन्होंने सीता के व्याह का विषय लेकर एक खंड-काव्य भी बनाया था।

(b) होश आने पर मीरा पैदल ही वृंदावन की ओर चली। राजरानी आज राह राह भिक्षा माँगती खाती चली; लेकिन उसके किये उनके मन में रत्ती भर क्षोभ नहीं हुआ। कृष्ण-नाम के प्रभाव से भूख प्यास थकन कष्ट आदि उनका कुछ बना नहीं सकते थे। जिधर से मीराबाई तन्मय भाव से हरि-गुण-गान करती निकलती थी उधर ही यह समाचार फैल जाता था कि मीराबाई इधर आ रही हैं।

(c) एक मक्खीचूसके पल्ले कुछ माल हो गया। तब उसके जीमें यह खटका लगा कि मेरी यह जमा कहीं किसी चोट्टे उठाईगीरेके हाथ न लग जाए! इसलिये अब ऐसा कोई उपाय रचना चाहिये कि जिससे मेरा माल किसीके हाथ न लग सके। इस चिन्तामें बेचारा दिन रात झुरने लगा! बहुतसा सोच विचार कर अन्तको उसने यह उपाय ठहराया कि अपने पास जो कुछ है, बेच कर रोक रकर लेना ही अच्छा है।

## URDU (FOR FEMALE CANDIDATES)

### COMPULSORY PAPER

*Paper-Setter and Examiner*—KHAN BAHADUR REZA ALI WAHSHAT

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. Translate into English any two of the following extracts :—

25

(a) ہمایوں نے دو برس کے بعد شاہ ایران کی کمک سے افغانستان کو فتح کیا - اُس وقت ماں باپ نے اکبر کو پہر دیکھا جسکی عمر اب دو سال نو مہینے آٹھ دن کی ہو گئی تھی - اسی اثنا میں کامران کا بل پر دو بارہ قابض ہو گیا - جب ہمایوں نے محاصرہ کر کے قلعے پر گولہ باری کا حکم دیا تو سنگدل چچا نے معصوم بھتیجے کو مورچہ پر لا بٹھایا جہاں گولے

گولبروں کی بوجھار ہو رہی تھی لیکن خدا کے فضل سے اکبر  
کر کچھ گزند نہ پہنچا \*

(b) نیک بخت شہزادہ بڑھیا کا دردناک ماجرا سنکر  
بہت کڑھا اور بولا ”اچھا مائی! اگر تو سچی ہے تو دو گواہ  
لا جو تیرے بیان کی تصدیق کریں“ - بڑھیا بولی ”بیٹا!  
گواہ تو بہت ہیں پر میں درتی ہوں کہ آنے جانے میں  
دیر لگی تو پھر تم تک رسائی دشوار ہوگی“ - شہزادے  
نے ہنسکر کہا ”خیر! میں اس جگہ کھڑا ہوں تم جاؤ اور  
اپنے گواہ لاؤ“ \*

(c) ان باتوں کے سوا اہلیا بائی میں ایک بڑی قابل  
تعریف بات یہ تھی کہ خوشامد سے اُسکو نفرت تھی - چنانچہ  
ایک برہمن اُسکی تعریف میں کتاب بنا کر لایا - جب  
تک وہ پڑھتا رہا خاموش بیٹھی سنا کی مگر جب وہ ختم  
کر چکا تو کہا ”بھلا میں ضعیف العقل اس صفت و ثنا  
کی کب مستحق ہوں“ - یہ کہہ کر وہ کتاب دریائے نرپدا  
میں ڈالوا دی اور اُس برہمن کی طرف مطلق التفات  
نہ کیا \*

2. Give the gender of any ten of the following words :—

جواب - خبر - دولت - بدن - انتظام - مالک -  
دستور - خرشامد - التفات - خیال - جستجو - تشریش -  
دکان - حساب - شام \*

3. Give the meaning in English of any five of the following words :— 5

یتیم - شفیق - وارث مدعا - دور اندیش - عزم -  
ساحل بحر - مسرور - کم خلقی - فہم کامل - عنان حکومت -  
غنیم - شجاع - کتاب - استقبال \*

4. Either, Give a short account in Urdu of the boyhood of George Stephenson. 10

Or, Relate in your own words the story of Fāth Khān, son of  
Sultān Fīroz Tughlaq, when the latter invaded Bengal.

5. Form plurals from—

5

روٹی - کتاب - گھوڑا - بات - مٹھائی

6. Correct mistakes in the following :—

20

اُسکا کمرہ میں کوئی آدمی نہیں ہے - ہم جب اُلیس  
 نہیں وہ یہاں نہیں تھا - تم روٹی کھائے ؟ - تمہارے باپ  
 کو بلاؤ - تمہارا دل میں کیا ہے ہم کیسے جانیں - اُسکا پاس  
 میرا گھڑی ہے - چار عورت گڑی میں ہیں - ابھی تم جانے سکتے  
 ہو - یہ بات سنکر تمہارے باپ کیا کہے ؟ - آپ یہ بات کس  
 سے سنا ہے ؟ - کل ہمکو کیوں نہیں خبر دیا ؟ - ابھی ہوا  
 بند ہو گیا ہے - تم نے چٹھی لایا ؟ - صاحب کیا کہا ؟ تم ہم  
 سے کیوں نہیں پوچھا ؟ - ہم نے اُسکی بہت تعریف کیا -  
 ان کتابوں میں کیا لکھی ہے - ہم اُس سے ملنے چاہتے ہیں \*

7. Translate into Urdu :—

25

- How do you know he is not coming?
- When he comes tell him that I will see him in the evening.
- Please forgive me this time. I am sorry for what I have done.
- Why did you not tell me you did not know Bengali?
- How old are you? Are you younger than Ram?

## KHASI TEXT

(FOR FEMALE CANDIDATES)

### COMPULSORY PAPER

*Paper-setter and Examiner—MR. ROY ROWLAND THOMAS, M.A.*

*Candidates are required to give their answers in their own words  
 as far as practicable.*

*The figures in the margin indicate full marks.*

1. Iathuh ia Ka Phawer kaba pynmib ia kawei na kine ki jingkynthoh 15  
 harum :—

- Uba rykhie pashait dei uba rykhie khadduh.
- U khynnah u long u kpa ia u rangbah.

2. Either, Iathuh khana ia Ka Phawer shuphang ka miaw, ki khnai 15  
 bad ka shakuriaw.

Or, Don ki jaid bynriew kiba duh thiah haba shem bha ki kha ki  
 man. Bad ki iap kut kum u bun hala ka jong ka tдем. Amplify and  
 explain this in Khasi with reference to the context.

3. Explain in Khasi any two of the following with reference to the 20  
 context :—

- Ka kam ka kren kham jam ban ia ka ktien.

(b) U bieit u ngeuw kat u ym don shuh, bad u kiew skong ha u Lang-tylli.

(c) Ang lut prie lut.

4. How is the causative verb formed in Khasi? 15

5. Iathuh shaphang ki sawtylli ki pateng bynriew hymman na Ki Proberb. 15.

6. Translate into English :— 15

Shisien ha ka por thma, shuwa ban kerkut ia kawei ka shnong da ki nongshun, la khot ia ka dorbar ki tawshnong baroh ban ia pyrkhat kumno yn iada ia ka na u nongshun. La mih nyingkong u nongdie mawit, bad u ong, 'Dei ban ker ia ka da u mawit mawit tang ma u uba shah eh na ki tiar baroh.' U nongkhai dieug pat u ong, 'Dei da u dieug sawdong uba kham shah bad ba dep kloi.' Hynrei khadduh eh mih u nongkhai snieh. U pat u ong, 'Nga ngam iadei jingmeit bad phi nadong hudong; ym don kaba kham lah ban shah bad kham jwat walor ka snieh masi.' Dei maka kaba bit eh ban ker kut ia ka shuung

7. Explain the following fully in Khasi :— 5

Me iohi u briew uba kyrkieh ha la ki kten? Kham kyrmen ia uba bieit ban kum ia uta.

## TAMIL (FOR FEMALE CANDIDATES)

### COMPULSORY PAPER

*Paper-setter and Examiner*—MAHAMAHOPADHYAY

VEDANTAVISARAD ANANTAKRISHNA SASTRI.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

1. அடியிற்கண்ட சொற்களின் பொருள் யாதென வினக்குக. 10

(a) ஆவல். (b) தம்மாதம்விவேகம். (c) எச்சரிக்கை  
(d) ஞானவாயு. (e) ஸ்வதம்மானுஷ்டானம். (f) ஆசாமச்சிறப்பு.

2. தசாவதாரங்கள் யாவை? அவற்றின் காரணங்கள் எவை? 15  
இராமரின் மேன்மை எக்குணங்களைப் பற்றியது?

3. இசுவரன் “ஸந்ஹஜருன்” “ஸந்வலியாபி” “ஸந்வசக்தி 15  
மான்” என்பவற்றைப் பற்றி ஒவ்வோர் உபாக்கியானம் விரையு.

4. எசலைவன், அற்றனுன் பிஷ்மர் இவர்களைப் பற்றி தெரிந்த 20  
வரையில் சுருக்கி எழுதுக.

5. மேழகண்டச் சொற் கொத்துக்களைப் புணர்ச்செய்து. அப்பு 20  
என்றி யின்காரணனுலையும் விரையு:—

(a) எ<sup>1</sup>மனை, (b) புளி<sup>2</sup>கறி, (c) இன்று<sup>3</sup>கான், (d) சான்<sup>4</sup>கோல்,  
(e) கடல்<sup>5</sup>ககா, (f) பூண்<sup>6</sup>தூல், (g) கன்<sup>7</sup>தூல், (h) பொன்<sup>8</sup>தரும, (i) கான்<sup>9</sup>தோறம், (j) தண்<sup>10</sup>கீர்.

6. Translate into Tamil the following passage :—

20

It is cool to-day, you must wear your thick coat. And to-night you will have to put a thick blanket on your bed. This is the cold season. There is a mist at night, and in the morning there is dew on the ground. We must buy plenty of wood for fires, and keep ourselves warm with woollen clothing. Two months ago, we had to wear our thinnest clothes, and we had to keep all the doors and windows open. Now we have to close them all at night. Soon it will be the hot season. The sun rises early, and it is not dark until after seven o'clock.

## TELUGU (FOR FEMALE CANDIDATES)

### COMPULSORY PAPER

*Paper-setter and Examiner—Mr. B. RAMCHANDRA RAU, M.A.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

*The figures in the margin indicate full marks.*

1. ప్రాథమిక పాఠశాలలో చూపు భాషయొక్క టి తప్ప మరియొక 20  
భాష చెప్పట యుక్తమా । కాదా । మీవాదనకు కారణములు విశద  
పరచుడు.
2. ప్రస్తుతము మీరు చదువు విద్యయొక్క లోపములు పేర్కొనుడు. 20
3. నృత్తి విద్యలననేమి. అవి దేశమునెట్లుద్ధరించ గలమా 10  
వ్రాయుడు.
4. పూర్వ కాలపు గురు సాంప్రదాయముయొక్క ముఖ్య లక్షణము 10  
లను పేర్కొనుడు.
5. లక్ష్మీ ప్రసాదమను గ్రంథమునుండి శ్రీరైట్టి నీతులు గ్రహించ 20  
గలరో వ్రాయుడు.
6. లక్ష్మీ ప్రసాదమను గ్రంథమందు సాంఘిక స్థితియొక్క లోపము 20  
తెల్లు పర్చింప బడెనో వ్రాయుడు.

## BURMESE TEXT

(FOR FEMALE CANDIDATES)

## COMPULSORY PAPER

*Paper-Setters*— { MAUNG WE LIN.  
                              ,,       BS. A.B.

*Examiner*—MAUNG WE LIN

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. မဟာဂီရိနတ်အကြောင်းနှင့်၎င်းနတ်ပွဲအခန်းအနားကိုသင်သိ 8  
သမျှဘော်ပြပါ။

2. ဇေယျသိန်မင်းနှင့်ပါပဟိန်မင်းသားတို့၏အကျင့်စာရိတ္တကိုပြိုင် 7  
နှိုင်း၍ပြပါ။

3. ဝိဓူရသုခမိန်၏ထူးခြားသောဂုဏ်အင်္ဂါများကိုသင်သိသမျှ 7  
ဘော်ပြပါ။

4. အောက်ပါရည်ညွှန်းချက်များကိုရှင်းလင်းဘော်ပြပါ။ 8

(က) သစ္စာပျက်ကမင်း ။ ဇနက်ညီရင်း ။ ပေါလမင်းသို့။

(ခ) ပေါက်ပြည်ထောင် ။ ရှေးပာခေါင်က ။ ကြောင် ၂  
မြှမ်းသွေး ။ စုက္ကတေး ။

5. အောက်ပါအသီးအသီး၏အဓိပ္ပာယ်ကိုရှင်းလင်းပြည့်စုံစွာ 20  
ဘော်ပြပါ။

ဣရိယာပုတ် ။ ခန္ဓါငါးပါး ။ ပဋိညာဉ် ။ ပဋိသန္ဓာရစ ၈  
ကား ။ မြင်းမိုရ်တောင် ။ မင်းတို့စကားသည် ထွက်ပြီးသော ဆင် ၈  
စွယ်ကဲ့သို့ ဖြစ်သည် ။ လောက၌ကျွန်မျိုးသည်လေးပါးရှိသည် ။  
အလဇ္ဇီသွင်း ။ နန်းညောက် ။ စနည်းနာ ။ တရားအမြိုက် ။ ဓမ္မ ၈  
ဩဇာ ။ အရသာကို ။ ချီစွာတိုက် ။ ပဉ္စသီကိုနိစ္စ ။ အဋ္ဌင်္ဂကိုရံခါ။

။ ရွှေခါးခံသီး ။ ရွှေလုံပြီး ။ ။ ဟူးဟူးပြောင်ပြောင်လောင်သောမီးကဲ့သို့ ကျင့်ရာသည် ။ ။ ဆင်ငွေကိုချည် ။ ။ ချီးမွမ်းတန်သည်လူရည်ကိုရှု ။ ။ အရွယ်သုံးပါးမှတ်သား သတိရှိလှစေ ။ ။ ပရိယတ်နှင့်ပဋိပတ်လည်း မပြတ်နှလုံးရှိလှစေ။

6. (က) အပဋ္ဌါနသင်္ချာခေါ်သောအရေအတွက်သေချာမပြသည့် နာမဝိသေသန အမျိုးမျိုး ကိုရေး၍ ။ အသီး အသီးအသုံး ပြုနည်းကို ဘော်ပြပါ။ 8

(ခ) ကြိယာဟူ၏ အကြောင်း ကိုစုံလင် စွာမှတ် ချက်ရေး သားဘော်ပြပါ။ 8

(ဂ) နာမ်အမျိုးမျိုးကိုခွဲခြား၍အဓိပ္ပာယ်ဘော်ပြပါ။ ။ စာစီကုံးရာ၌မည်သည့်ပုဒ်မျိုးတို့ ကိုနာမ်ကဲ့သို့သုံးသနည်း။ 9

7. အောက်ပါစာလုံးကိုအင်္ဂလိပ်လိုပြန်ပါ။ 25

ဤသို့ မင်းကြီးအား လျင်စွာ သွားမည့်အကြောင်းကို ။ တိုက်တွန်းသောအခါ။ သေနကအမတ် ရှိချေလျှင် ။ မိမိစိတ်လိုရာဝင်၍ ပြောဆိုတတ်သောကြောင့် ။ ထိုသေနကအမတ်စကားကို ပယ်လွန်ချေလဲရသဖြင့်ပင် ။ အချိန်လွန်နှင့်မည်စိုးသည်ဖြစ်၍ ။ သေနကအမတ်နှင့် စကားမပြောလိုသဖြင့် ။ မင်းကြီး၏ရှေ့ကသွားစေသတည်း ။ ထိုသို့သောအစီအရင်ဖြင့် ။ ဝိဒေဟရာဇ်မင်းကြီးသည် ဥမင်သို့ ဝင်သွားလေသည်ရှိသော် ။ ဘုရားလောင်းသည်လည်း ။ မင်းကြီးနောက်ကလိုက်၍ ။ အလုံးစုံသော မှတ်တံခါးလေသာပြတင်း ။ မင်းတို့နေရာထိုက်ခန်း၌ ။ အဆန်းအကြယ်ဖြစ်သော ပန်းချီဆေးရေးချယ်သည်တို့ကို ပြည့်န်လျှောက်ကြား ပေ၏ ။ စူဠနိဗြဟ္မဒတ်မင်း၏ မယ်တော် ။ မိရုဇားကြီး ။ သားတော်သမီးတော်တို့ကိုစောင့်ရှောက်လျက်နေကုန်သော သူရဲတို့သည်လည်း ။ ဝိဒေဟရာဇ်မင်းကြီးလာကြောင်းကို သိလျှင် ။ ထိုမင်းလေးပါးတို့ကို ။ ဥမင်တိုက်ခန်းမှထုတ်ဆောင်၍ ။ လက်ထပ်နန်းပြာသာဒ်ထက်၌ တင်ထားနှင့်ကြလေ၏ ။ ။ ဝိဒေဟရာဇ်



မင်းကြီးသည်။ မဟောသဓာသုခမိန်နှင့် စကားပြောဟောလျက်။  
 အစဉ်အတိုင်းလာလတ်၍။ ဥမင်တံခါးဝမှထွက်ကြလေသော်။ မင်း  
 လေးပါးတို့သည်။ ဝိဒေဟရာဇ်မင်းကြီးကို၎င်း။ မဟောသဓာသုခမိန်  
 ကို၎င်း။ မြင်လျှင်။ ငါတို့သည် ယခုရန်သူလက်သို့ရောက်ခဲ့ပြီ။ ငါတို့  
 ကိုခေါ်ဆောင်လာသောသူတို့ကား။ ငါတို့မင်းကြီးကစေသောသူမ  
 ဟုတ်။ မဟောသဓာကစေသောသူဖြစ်ရာ၏ဟု ကြံကြလျက်။ သေအံ့  
 သောဘေးမှ ကြောက်ကုန်သည်ဖြစ်၍ သည်းစွာသော အသံဖြင့်  
 ငိုကြွေးကြကုန်၏။

### PORTUGUESE TEXT

(FOR FEMALE CANDIDATES)

#### COMPULSORY PAPER

*Paper Setter and Examiner—DR. P. D. BRAGANCA CUNHA*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write in Portuguese what you know about Rabindranath Tagore. 15
  2. Translate the following verses : — 31
- Oh ave do deserto, o meu coração achou o seu paraíso nos teus  
 olhos.  
 São eles o berço da manhã e o reino das estrelas.  
 O seu abismo devora os meus cantos.  
 Deixa-me pairar n'esse céu imenso e solitário.  
 Deixa-me fender as suas nuvens e desdobrar as minhas asas ao  
 seu sol.
3. Write a short essay in portuguese on :— 25
  - “ Faz-me as barbas, far te hei o cabelo.” 20
  4. Give examples by writing four sentences where the infinitive is  
 used as a complement.

#### ADDITIONAL PAPER

*Paper-Setter and Examiner—DR. P. D. BRAGANCA CUNHA*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

Translate the following passage into English :—

1. Aqueles que pelo seu trabalho concorreram para facilitar, desem- 30  
 volver e tornar mais productivo o trabalho dos outros, isto é para os ensinar

e educar, habilitando-os para serem bons e felizes, esses são benemeritos no mais elevado gráu : e nêsse grupo está o sabio. O que no seu gabinete, sózinho, pensa e das suas cogitações, no proposito de ensinar coisas gnoradas que elle descobre, ou de aperfeiçoar ou propagar pelo seu trabalho as já conhecidas, esse é o obreiro por excellencia, porquê é o méster dos mêtres e o guia dos trabalhadores.

Gloria a esses, e em geral aos trabalhadores do pensamento, que a sua vida consomem no mais alto e difficil labôr—e que nenhuma remuneração material saberia pagar nem paga;...e depois d'esses, gloria aos seus apóstolos que sao os profivroses, os mestres, os que ensinam a explicar ao póvo os livros e a óbra dos pensadores.

2. Render in Portuguese the following :—

80

There will be no lack of those who will laugh on hearing speak of education of a child only three or four years old. Nothing, however, is more serious and necessary than to profit by the sincerity of this age, which does not yet know how to lie, in order to recognise the future man in the child.

It offers the best opportunity for improving all qualities of character—yea, even to make the best of its defects to change them into virtues, without twisting the will or wronging the individuality. From the infant-school, where the mother had placed the child, because was impossible to have it at home from its third year, it passes over to attend the public school.

3 Give example: of adjectives expressing cause or design and followed by the infinitive. 20

4. Write four sentences where the infinitive is employed as a substantive i.e., O andar cansa. 20

## BENGALI VERNACULAR

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*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write in your own words the substance of any one of the 10 following : -

(a) পানামো by Sanjibchandra Chatterjee.

(b) শরৎ by Rabindranath Tagore.

2. Explain any four of the following with reference to the context :— 24

- (a) বিদেশীর ইতিবৃত্ত দখ্য বলি করে পরিহাস  
অট্যাশ্চর্যে,—  
তব পুণ্য চেষ্টা যত তব্বরের নিষ্ফল প্রয়াস—  
এই জানে সবে।

(৷) যে তেজস্বী পুরুষের অমিত তেজে ও বজ্রগভীর স্বরে শত শত  
বীরের হৃদয় কম্পিত হইত, যিনি “বাল্মীকীর ব্যাঘ্র” নামে পরিচিত  
হইয়াছিলেন, তাঁহার বাড়ীর দ্বারে, বারাগায়ে, গৃহ-কোণে এত লোকের  
নিত্য ভিড় হইত কেন ?

- (৮) গীত গোবিন্দের শ্লোক গাহিয়া গাহিয়া  
ভ্রমিলাম কুঞ্জে কুঞ্জে, পাণ্ডুরা আসিয়া  
গলে পরাইয়া দিল বর গুঞ্জমালা।  
তবু ভরিল না চিত্ত, সর্বতীর্থসার,  
তাই মা, তোমার পাশে এসেছি এবার।

(৮) রত্নাকর আত্মিনায় আসিয়া বলিলেন, “লক্ষ্মী-জনার্দনের ভোগ  
এনেছি। ঠাকুর, গ্রহণ করে কৃতার্থ করুন।” ব্রাহ্মণ-ব্রাহ্মণী উভয়ে  
অবাক হইয়া গেলেন।

- (৮) নিজের দীনতা ভাবিয়া শ্রীধর পারে না রোষিতে বারি।  
লাগিতেছে আজ মুকুতার মালা পাষাণের চেয়ে ভারি ॥  
এমনই হরির অহেতু করুণা—প্রেমের এমনই বাহু।  
কয়লা-হৃদয় গলি’ হীরা হয় তব্বরও হয় সাধু ॥

(f) তিনি বজ্রধ্বয়ের মঙ্গলকামনায় গোপনে তাঁহাদিগকে বলিলেন,  
“দেখিতেছ কি, তোমাদের সৌভাগ্য-শশী তমসাবৃত্ত হইবার উপক্রম  
হইয়াছে। তুস নগরে জনৈক অলৌকিক গুণসম্পন্ন প্রসিদ্ধ কবি আছেন,  
তাঁহার কবিত্বশক্তি অতুলনীয়। সম্রাট তাঁহাকে গজনীতে আনয়নার্থ  
সংবাদ প্রেরণ করিয়াছেন”।

3. Reproduce from memory any eight consecutive lines from either Hemchandra Banerjee's *Kāśī* or Rabindranath Tagore's *Sarat*. 6

4. (a) Rewrite the following, correcting all errors and defects :— 6

সে দৌড়াতে দৌড়াতে উছট খাইয়া পড়ে গেল, আকস্মিক ভাবে  
একটি খানার ভিতরে। এই পতিতের ফলে ভাঙ্গিয়া গেল তাহার  
একখানি পা এবং সাত মাস শয্যাশায়ী হইয়া রইল। পূর্বে যে সকল  
বন্ধু-সমূহ তাহার কাতরের সংবাদ শুনিয়া তাহাকে দেখিতে আসিত,  
তাঁহাদের দীর্ঘ-বাস, “আহা” “উহ” শুনিলে মনে স্বাভাবিক হইত যে

তাহারা সত্যই তাহাকে খুব ভালবাসিয়াছিল; কিন্তু তাহার এই পতন-ঘটিত দুরবস্থার সময় অর্থের কমতি পড়াতে তাহাকে কেহ সাহায্য করিতে অগ্রসার হইল না।

(b) Fill up the blanks in the following :—

4

তুমি——আমাকে যে রূপ স্নেহ করিতে, এখনও কি সেইরূপ  
——কর ? তোমার——দেখিয়া আমার——কিন্তু——হয়।  
তুমি সত্য বলত আমার——সংবাদ শুনিয়া তোমার মনে কি ভাবের  
——হইয়াছিল।

5. Give in your own words the substance of the following :—

15

দেশবন্ধুর মৃত্যুতে।

ওরে বাংলার কিশোর-কিশোরী, তোদের এ শোক সহ্যে না আর,  
তোরাই যে তাঁর মমতার ফুল, নয়নের মণি ছিলিবে তাঁর।  
তোদেরি বুকের দরদ জুড়াতে করেছেন যিনি অটল পণ,  
শাস্ত্র যার প্রতিষ্ঠা-বেদী, অন্তরে মধু-বুন্দাবন,  
সর্ব-শ্রেষ্ঠ তর্পণ তাঁর,—হও আশ্রয়ান অহিংসায়,  
তাঁরি বাঞ্ছিত স্বরাজ্যের পথে, প্রণমিয়া দেশ-দেবীর পায়।  
সেই এক ঠাই ভেদ-জ্ঞান নাই—খ্রীষ্টান হিঁদু-মুসলমান—  
চোখের জলের যুক্ত বেণীতে করগো সকলে মুক্তি-মান !  
হে ব্যথা-হরণ নিখিল-শরণ, দাও শোকাতুরে শাস্তিজল  
মুছাও নয়ন, বুচাও বেদনা, দাও সাস্থনা, দাও গো বল।

6. Translate the following into Bengali :—

15

Gokhale gave me an affectionate welcome and his manner immediately won my heart. This was my first meeting with him and yet it seemed as though we were renewing an old friendship. Pherozeshah Mehta had seemed to me like the Himalaya and Tilak like the ocean. But Gokhale was as the Ganges. The Himalaya was unscalable and one could not easily launch forth on the sea, but the Ganges invited one to its bosom. It was a joy to be on it with a boat and an oar.

7. Write an essay in Bengali on one of the following subjects :—

20

(a) The life of Iswarchandra Vidyasagar—his early struggles, his scholarship, his charity, social reforms, contributions to Bengali literature, uprightness, independence and devotion to mother.

(b) Character—its great value in life; higher than wealth and talents. Genius and learning of no use to a man without character.

ASSAMESE

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*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate one of the following passages into Assamese:—

15

(a) Aurangzeb sent orders to Mir Jumla to undertake the conquest of Assam. It was the common belief that Aurangzeb sent Mir Jumla to Assam to get rid of him, because the Emperor feared that Mir Jumla might attempt to place some one else on the throne. Mir Jumla at the head of his brave captains went forth to conquer Assam taking with him his loyal follower Diler Khan. Both were anxious to open to Aurangzeb a door for entering China, for that seemed an easy thing after the acquisition of Assam. Assam lies among mountains, is a fertile country, most luxuriant in food-products and fruit, which are here found of various kinds, such as pears, apples, peaches and grapes. Mir Jumla and his soldiers reached the principal city of the Assam kingdom, called Gargaon, and fighting bravely drove out the Raja. The latter retired in the mountain, and Mir Jumla, after occupying the capital caused the tombs to be destroyed, which contained great treasures, it being the Assamese custom to bury with the dead all the wealth that he possessed. MANUCCI.

(b) One day Pandit Iswarchandra Vidyasagar was at work in the Fort William College when news came that his brother was about to be married, and his mother very earnestly wished him to be present at the wedding. He went direct to the head of the College, and asked, 'May I go to my native village for my brother's wedding?'

'No', replied the Chief.

'Then I must resign my post if I may not go, for I cannot let my mother shed tears.'

The Chief's heart was touched, and he granted leave. It was then July, the middle of the rainy season, and Vidyasagar had to walk the whole distance. At three in the afternoon he set out for his native village. At night he halted at a wayside shop; and early next morning he marched forth. The rains were falling heavily, lightning glittered, the thunder clapped, and mud was thick on the roads. Vidyasagar pressed onward to the river Damodar. The stream was in full flood. A ferry usually took people across but the boat was fastened to the opposite bank, and the ferryman was nowhere to be seen. Thinking of his mother Vidyasagar swam boldly across the Damodar. At night Vidyasagar reached home. He entered the house and called out 'mother!' The mother knew his voice, and came out to meet her son.

2. Either, Quote from memory any eight consecutive lines either from উলাহ সন্নীত or ইয়া-চিঅ।

8

Or, Give in your own words in Assamese the substance either of বশিষ্টাশ্রম or of গহন পাত।

3. *Either*, Briefly describe, after the author of *Sarathi*, the evil effects of the different kinds of intoxicating drugs in use in Assam, and show how they ruin the health of the people. 10

*Or*, Show how the teachings of *Sarathi*, help us to become ideal men.

4. Explain fully *four* of the following passages, selecting *two* from Group A, and *two* from Group B :— 4 × 6 = 24

GROUP A.

(a) জায়বন্ত মাহুহ তজুৰ নিচিনা। তাৰ মানত খুদ পৰিমাণ  
প্ৰভেদো ডাঙৰ প্ৰভেদ।

(b) সময়ৰ লগত আঙুৰাই যোৱা মাহুহে তাৰ কৰ্মৰ জোখাৰে  
ফল পায়, পাচপৰা বিলাকে নাপায়। সময়ৰ অনুৰূপ কাম কৰাই  
উদগতিৰ ঘাই উপায়।

(c) দীৰ্ঘকাল জীয়াই থাকিলে মাহুহক দীৰ্ঘজীৱী বোলে, কিন্তু  
দবাচল পক্ষত তেনে মাহুহক দীৰ্ঘজীৱী নুবুলি যি সংসাৰত সৰহ কাম  
কৰে তাকহে দীৰ্ঘজীৱী বোলা উচিত।

GROUP B.

(a) কিষে স্বার্থপৰ হিয়া দয়ামায়া নাইকিয়া,  
জীৱৰ প্ৰধান বুলি কৰে অভিমান ;  
বিলাস সম্ভোগ তৃপ্তি খন্তেকীয়া মুখ অতি  
জানিয়ো তথাচ হাঁয় বধে মোৰ প্ৰাণ।

(b) লাবণ্য বিনয় প্ৰীতি হিয়াৰ সম্বল  
লাজ মান মুখৰ ওৰণি,  
নোহোৱা পাৰ্শ্বিক ধন স্বৰ্গীয় কুসুম  
শোভি আছা প্ৰকৃতি ফুলনি।

(c) গোবৰ কাহিনী কিম্বা কলঙ্কৰ স্মৃতি  
গাইছা অজস্রমুখে, অপূৰ্ণ সঙ্গীত  
বাজিছে কানত যেন বিগিকি-বিগিকি  
মহত্বৰ সাক্ষী, তুমি অনন্ত যৌবনা  
বিহৰিছা ভূগভত, মুবুজো তোমাৰ  
জীৱন বহন্তলীলা।

5. Give the meanings of *five* of the following expressions:—

5

আপুৰুগীয়া, বাছকবনীয়া, উদ্‌বাউল, বিনন্দবিলাস, ধনশুলৈ, অময়াপুৰী,  
জীপ দিয়া, আঢ়ায়ন্ত !

6. State in your own words in Assamese the leading ideas contained in *one* of the following passages :— 12

(a) হুখ-বেজাৰৰ জীৱনত গান আনন্দৰ সৰোবৰ। হুখ-বেজাৰ  
শুচোৱাৰ, সংসাৰ পাহৰাৰ, এই অপবিত্ৰ পৃথিৱী এৰি একে জাপে

স্বৰ্গলৈ গৈ স্বৰ্গৰ বিমল আনন্দ ভোগকৰাৰ গান ভেলেকী-মন্ত্ৰ।  
 যেতিয়া আমাৰ জীৱনে শৰতৰ জোনাক বাতি বা বসন্তৰ মলয়া  
 বতাহত আনন্দত উজ্জ্বল হৈ নাচি ফুৰে, তেতিয়াও আমাক গানে  
 নতুন আনন্দ দিয়ে। যেতিয়া আমাৰ জীৱন বোগ হুখ আৰু বেজাৰত  
 ভ্ৰিয়মাণ হয়, তেতিয়াও গানে আমাৰ শুকান মনক আনন্দৰ পানীৰে  
 বুবাই পেলায়, এক মুহূৰ্তকতে সংসাৰৰ পোৰণি-দেৱনি মাৰ নিয়ায়।  
 গান গাই মাকে পুত্ৰৰ শোক পাহৰে, ছখীয়াই ছখৰ অবস্থা পাহৰে,  
 বিধৱাই স্বামীৰ শোক পাহৰে, ফাটেকীয়াই ফাটেকৰ যন্তনা পাহৰি  
 যায়।

(b) গাঁৱলীয়া বোৱাৰী।

কাৰ্য্যক্ষম, পৰিশ্ৰমী, শৰীৰ শকত,  
 কেতিয়াও নিবিয়লৈ অলপ জহত,  
 শকত শৰীৰে হয় শক্তিমন্ত্ৰ স্তনয়,  
 পৰিশ্ৰমী তিবোতাৰ পৰিশ্ৰমী স্তত,  
 আটিল শৰীৰ দেহ বহু বলযুত।  
 অসভ্য মুখৰ মাত কদাপি নুশুনি,  
 কথা কয় যেন ভোমোৰাৰ গুণ্গুণি।  
 সভ্য নোহে, শিক্ষা নাই,  
 তথাপি শিক্ষিতা তাই,  
 গাঁৱলীয়া বোৱাৰীয়ে নাৰীৰ উত্তমা,  
 পতিব্ৰতা আজলী সি বধু মনোৰমা;

7. Join the following sentences to form one simple sentence;—

6

ঋষিকুমাৰ বিলাকে হাবিৰ মাজত ফুলফল কুশকাঠ গোটাই আছিল।  
 হাবিখন গঙ্গাৰ পাৰতে আছিল। হঠাতে তেওঁবিলাকে কেনিবাৰি  
 তিবোতাৰ ককন কান্দোনৰ শব্দ শুনিবলৈ পালে। তেওঁবিলাকে  
 চাৰিওফালে বিচাৰিবলৈ ধৰিলে। অলপসময়ৰ পাচতে তেওঁবিলাকে  
 এগৰাকী তিবোতাক কান্দিধকা দেখিবলৈ পালে।

8. Write an essay in Assamese on one of the following subjects :—

20

- The Bahag Bilu festival.
- Princess Jaymati.
- The rainy season in Assam.
- Newspapers and their utility in modern times.
- Either, Anundoram Boroosh or Mr. Abdul Mazid, C.I.E
- Any journey which you have undertaken.



## HINDI VERNACULAR

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,, DINANATH SARMA, M.A., B.L.

*Examiners*—{ PANDIT SIBNARAYAN JALA, A.I.S.A.  
MR. LALITMOHAN RAY, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Explain any two of the following —

(a) सुभग-स्वर्ग-सोपान-सरिस सब के मन भावत । 10

दरसन मज्जन पान त्रिविध भय दूर मिटावत ॥  
श्रोहरि-पद-नख-चंद्रकान्त-मनि-द्रवित-सुधारस ।  
ब्रह्म-कर्मडल-मंडन भव-खंडन सुर-सरबस ॥

(b) प्रेम के निकेतनों के प्रेमिक परम होंगे, 10

प्यार-भरा प्याला प्यारवाले को पिलावेंगे ।  
हिंसक की हिंसा को कहेंगे कभी हिंसा नहीं,  
मान वे अहिंसकों को दिल से दिलावेंगे ॥

(c) गरल सुधा रिपु करै मिताई । 10

गोपद सिंधु अनल सितलाई ॥  
गल्ल सुमेर रेनु सम ताही ।  
राम कृपा करि चितवहिं जाही ॥

2. *Either*, Describe the causes which led to the failure of Dara. 12

*Or*, Are robbery and violence justifiable under any circumstance? Is there any extract in your text-book which has dealt with the subject? What do you gather from a perusal of the extract? Discuss in Hindi.

3. Translate any two of the following passages into English :—

(a) कालाकांकर भूलने की वस्तु नहीं है, वह छोटा सा रम्य स्थान, 10  
सचमुच स्वर्ग का टुकड़ा था । उसमें रहने का समय भूस्वर्ग में रहने के  
समय की भांति था । चिन्ता बहुत कम थी, वासनाएं भी इतनी न थीं,  
विचार भी सीमाबद्ध स्थान में विचरण करता था ।

(b) गो, यह सब है, लेकिन गरीबों और मोहताजों की सच्ची मां 10  
सलीमा ने आज दिल खोलकर गरीबों और मोहताजों को बखूबी खाने और

कपड़े बांटे हैं, और खैरात करने में ज़रा कसर नहीं की है, मज़हब की यह इतनी पाबंद है कि नमाज़ और रोज़े से कभी गफ़लत नहीं करती।

(c) कहन कठिन समझ अपार। इसी से तो कर्णामयी शंकरी ने 10  
वृन्दावन में प्रेमपुञ्ज कृष्ण का रूपधारण कर इस पवित्र प्रेम की ज्वलन्त शिक्षा दी है और उज्ज्वल आदर्श छोड़ा है। प्रेममयी मा, तु धन्य है।

4. Give very briefly, in simple Hindi, the main ideas contained in the following :— 10

जिस समय तक चिकित्सक की यह अभिलाषा रहती है कि उसके तुच्छ शरीर से देश की कुछ सेवा हो सके, जब तक उसे निर्धनों की सहायता करने की चिन्ता रहती है, तब तक तो वह उस कार्य को पूर्ण रूप से तल्लीन होकर करता है, तभी तक उसे उस कार्य के करने में वास्तविक आनन्द का अनुभव होता है। पर जिस समय उसे द्रव्य का लोभ हो जाता है, उसी क्षण उसे द्रव्योपार्जन की चिन्ता लग जाती है; देश सेवा एवं निर्धनों की सहायता के भावों का उसके हृदय में लवलेह तक नहीं रह जाता।

5. Translate one of the following into Hindi :—

(a) A little more than a hundred years ago, there lived in France one of the greatest soldiers who have ever been known. His name was Napoleon Bonaparte. He loved war and was never as happy as when he was fighting. He loved power too, and won it, for he knew well how to manage men, and make them do as he wished. His men were very proud of him, and gladly bore pain, and hunger, and hardship to serve him. Thousands of them were killed, but there were always thousands more to take their places. 10

(b) We must not only wash our hands and faces, but also the whole of the body, for sweat and oil come through the pores of every part of our skin. The people who bathe often not only keep themselves in good health but they also keep their minds fresh, and so they are generally cheerful. In a hot land like India, where we sweat very much and where there is much dust, it is very important that every one should bathe the whole of his body regularly every day. 10

6. (a) Write sentences to illustrate the meanings of five of the following words and expressions :— 5

(i) घात पाना; (ii) रॉगटे खड़े होना; (iii) मुठभेड़; (iv) भाग्य का पासा गिरना; (v) जी चरुना; (vi) हिमायत; (vii) मज़ा किरकिरा करना; (viii) लासानी।

(b) Fill up the blanks in the following :— 5

एक दिन गुरुजी — उस — कहा, “अब तुम्हारी पढ़ाई तो समाप्त हो —। जाओ अपनी मातृभूमि — सेवा करो, उसे कष्टों

। स्वाधीनता — युद्ध में तुम्हें प्राण तक — ” ।  
 पाँच वर्ष बीत — । गाँव-गाँव घूम — उसने उपदेश — ।  
 लोगों में हड़ता बढ़ने — ।

7. Re-write the following correctly :—

8

वसन्त की सुहावनी ऋतु थी । सहसा मैंने एक दिन बड़े भैया को  
 कह कर लाहोर के तरफ चल पड़ा । अमृतसर में पहुँचकर स्वर्ण मन्दिर  
 देखने चले । यह नगर के बीचोबीच में है । भीतर में जाने को फाटक  
 पर जूता उतारकर पैर धो लेना पड़ता है । फिर जालियाँवाला बाग जा  
 पहुँचे । देखते ही आँख छलछला उठा और आँसू टपकने लगी । वहाँ का  
 पवित्र धूल माथे में लगा लिया ।

8 Write a short essay in Hindi on any one of the following subjects :— 10

- (a) A railway journey.  
 (b) A shower of rain in the evening after a very hot day.  
 (c) The Diwali festival.

## MAITHILI VERNACULAR

*Paper-Setters—* { PANDIT BABUA MISRA.  
 { KUMAR GANGANANDA SINHA.

*Examiner—*PANDIT BABUA MISRA.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Give in not more than two hundred words a description in Maithili of the burning of Laṅka by Hanumāna as depicted by Chandā Jhā. 20

*Or*, State the immediate and remote causes of the war between the Kauravas and Pāṇḍavas which you know from reading the Mahābhārata-Sāra of Pandit Ramānanda Thākura.

2. *Either*, Give a pen-picture of the events leading to the wedding of Rāma as you know them from the Rāmāyana of Chandā Jhā. 20

*Or*, Give a synopsis of the Sukanyopakhyaṇa in simple Maithili as briefly as you can.

3. Amplify the ideas contained in the following extract in simple Maithili :— 15

भूमिकम्प छी प्रबल विश्व-विप्लव-कारी हम  
 छी अति प्रखर तरङ्ग रुढ़ि-गिरि-रजकारी हम

दावानल प्रज्वलित दासता छयकारी हम  
 झंझानिल सम छी स्वतंत्रता रवकारी हम  
 अन्यायी-सत्ताक छी प्रलयगगनसँ अति विषम  
 हमरहि क्यु हुंकार सँ महाप्रलय होइछ नियम ॥

4. Translate the following passage into Maithili :—

15

A lamb pursued by a wolf took refuge in a temple. Upon this the wolf called out to him and said that the priest would slay him if he caught him. 'Be it so,' said the lamb, 'it is better to be sacrificed to God than to be devoured by you.'

5. Construct sentences to illustrate the use of any five of the following :— 10

- (a) छोट खिखिर के मोट नाँगड़ि
- (b) घर भुजी भांग नहि तम्बुक केर फरमाइस
- (c) भेल विआह मोर करबह की ?
- (d) चोर कतहु इजोत सहे ?
- (e) छूटल घोड़ भुसबड़बंदि ठाढ़
- (f) अन्हरा के जगनहि की और सुतनहि की ?

6. Write in Maithili an essay on one of the following subjects :—

20

(a) *New Delhi* :—(i) The Royal Command. (ii) Work of construction; combination of the east and the west. (iii) Inauguration by Lord Hardinge of Penshurst. (iv) Reflections on its place among the seats of former empires of India.

(b) *Bullock-cart* :—(i) Its place in old and new India. (ii) Its usefulness. (iii) Modern transport and its future.

— —

## NEPALI VERNACULAR

*Paper-Setters*—{RAI SAHIB HARIPRASAD PRADHAN.  
 MAJOR S. THAPPA.

*Examiner*—MR. SURYA VIKRAM GEWALI, B.A., B.T.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks.*

1. Translate into Nepali any two of the following passages :—

40

(a) One day the dog had waited till all the poor people were gone. Having himself got very little to eat, he reached up, took hold of the rope by his teeth, and rang the bell. A good dinner was at once handed out, and the dog ate it with great delight. This was done by the dog for several days; but the rogue was at length found out. It was thought, however, so clever for a dog, that he was allowed to take his regular turn at the dinner every day. And thus he went on for a long time, ringing the bell, and taking his meal with the other beggars.

(b) Some years ago, a number of English officers in India went out to hunt. On their way home after their day's sport, they found in the jungle a little tiger kitten, not more than a fortnight old. They took it with them; and when they reached their tent, the little tiger was provided with a tiny dog-collar and chain, and tied to the tent-pole, round which it played and frisked to the delight of all who saw it. Just as it was growing dark, however, about two hours after the capture, the people in the tent were checked, in the midst of their mirth, by a sound that caused the bravest heart among them to quail.

(c) When the people of the island saw the ships of Columbus, they were very much surprised; for they had never heard of Europe, or of the people who lived there. After filling his ships with treasure got from the natives, Columbus sailed back to Spain. When the other nations of Europe heard of the great discovery of a new world, they wished to share in its riches. Many nations, therefore, sent out ships and men to try to gain possession of part of it. The poor natives were not well treated by many of the people who took their beautiful islands from them. Their new masters used them so cruelly that they were soon almost all destroyed.

2. Write an essay in Nepali on any one of the following subjects :— 30

(a) Rural life in India—its advantages and disadvantages.

(b) Cruelty to animals and how to prevent it.

(c) Cleanliness is next to godliness.

3. Fill up the gaps in the following passage :— 15

तेस ले हाने का दुःखा यतावाट आउंछन — पत्ता पाईदैनथ्यो ।  
 चारै तिर — दुःखा को वृष्टि — ता पनी, ती दुई भाई — पनी  
 चारै — बाण को — गरी दशै दिशा — व्याप्त गरे । राक्षसी  
 का — पनी धेरै बाण गिरे । तेस्ता तीखा तीखा बाण — चोट  
 कहिल्यै पनी तेस — खायेकी थियिन ॥

4. Either. Describe briefly in Nepali the result of the Muhammadan conquest of India. 15

Or, Can you justify the conduct of Bibbisan in deserting his own brother Ravana to join his brother's enemy Ram? Give the answer in Nepali.

## URDU VERNACULAR

Paper-Setters— { MAULVI SYED MD. TAHIR RIZUI.  
KHALIFA MD. ASADULLAH.

Examiner — KHAN BAHADUR MAULVI REZA ALI WAHSHAT

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Re-write in your own Urdu, either of the two extracts given in the following :— 10

(a) سب سے زیادہ گران وزن اور جامع الفاظ جو کسی کی تعریف میں بولے جا سکتے ہیں اسکے سرا خیال میں نہیں آتے کہ فلاں شخص اعلیٰ درجہ کا دل و دماغ رکھتا ہے لیکن اکثر ان الفاظ کا استعمال اپنے معمول پر نہیں ہوتا کیونکہ لیاقت جو دماغ سے علاقہ رکھتی ہے اور نہی جو دل سے علاقہ رکھتی ہے یہ دونوں اکثر ایک جگہ جمع نہیں ہوتیں۔ مگر سرسید میں جس طرح بعض دیگر متضاد لیاقتیں جمع تھیں اس طرح اس کو خدا تعالیٰ نے دل اور دماغ دونوں اعلیٰ درجہ کے عنایت کئے تھے یہاں تک کہ اس کی نسبت یہ کہنا مشکل تھا کہ اسمیں نہی زیادہ ہے یا عقل۔ لیکن جہاں تک غور کیا جاتا ہے اس کی رائوں میں تو شاید خطا کی گنجائش ہو مگر اس کے اخلاق و ائیل سے پاک معلوم ہوتے تھے \*

(b) جس طرح جسمانی حیثیت سے بعض انسان کمزور ناتوان اور ضعیف القویٰ ہوتے ہیں بعض تنومند قوی ہیکل اور دیو پیکر۔ اسی طرح روحانی حیثیت سے بھی باہم امتیاز مراتب ہوتا ہے یعنی بعض کم حوصلہ و کم زور طبع ہوتے ہیں بعض اولو العزم و بلند حوصلہ۔ اس

اختلاف کا فطری نمبر یہ ہے کہ دونوں کے نتائج عمل مختلف ہوتے ہیں۔ کم-زور و تنگ حوصلہ انسان کی عادت ہے کہ وہ ہمیشہ بلند رتبہ و صاحب اقتدار اشخاص کو حیرت کی نظر سے دیکھتا ہے اور اُنکو اپنے سے ایک بالاتر و ما فوق الفطرت وجود خیال کر کے سر اطاعت خم کر دیتا ہے۔ خود اُسکی نقل و حرکت اور اُسکا ارادہ کوئی چیز نہیں رہتا بلکہ اُسکی حالت اُس حیوان کی طرح ہوجاتی ہے جو انسانی ہستی کے اقتدا سے ہمیشہ مرعوب و خوف زدہ رہتا ہے \*

2. Give meanings of the words underlined in the two extracts in Question 1. 5

3. Explain any two of the following in your own Urdu:— 10

(a) تعصب کہ ہے دشمن نوع انسان  
بہ-رے گھر کئے سیکڑوں جسٹے ویران  
ہوئی بزم نمرود چس سے پریشان  
کیا جسٹے فرعون کو نذر طوفان  
کیا جوش میں بولہب جسٹے کھریا  
ابر جہل کا جسٹے بیہ-را ڈہریا

(b) خورشید نے جو رخ سے اُٹھایا نقاب شب  
در کہل گیا سحر کا ہوا بفسد باب شب  
انجم کی فرد فرد سے لیکر حساب شب  
دفتر کشائے صبح نے اُلٹی نقاب شب  
گروں پہ رنگ چہرہ مہتاب فق ہوا  
سلطان غرب و شرق کا نظم و نسق ہوا

(c) پھر بعد مرگ کیسی بنے کچھ خبر نہیں  
یہ وہ خطر ہے جس سے کسیکو مفر نہیں

پر کیا ہی تہیت ہم کہ اسکا بھی در نہیں  
 عقل معاد سے ہمیں بہرہ مگر نہیں  
 رب العباد نعمتِ فکرِ معاد دے  
 فکرِ معاد دے ہمیں ذکرِ معاد دے

4. Write short notes on the words underlined in extracts (a) and (c) of Question 3. 5

5. Give in your own words what you understand from 10

دولت اور رقت کا منظرہ

6. (a) Fill up the blanks :— 5

ہمارے مزاج — شر و فساد نہیں ہے — اُن سے  
 صلح کر لیتے ہیں اُن — یہاں پھر چلے آتے ہیں اسپر  
 بھی ہم — راضی نہیں ہیں بغیر دلیل و حجت کے دعویٰ  
 — ہیں کہ ہم مالکِ وہ غلام ہیں \*

(b) Either, Point out the genders of any five of the following :— 5

وقت - ثروت - کدورت - دنیا - گلشن - دعویٰ -  
 تصور - تردد - عکس - اثر

Or, Give the opposite numbers of the following :—

علم - شعر - تاریخ - حکما - اقسام

(c) Use any five of the following in sentences :— 5

برل بالا ہونا - آگ ہو جانا - طوفان اُٹھانا - مرنے والا ہونا -  
 دم بھرنا - چال چلنا - سر چڑھنا - ہوا کھلانا

7. Expand the idea contained in the following verse :— 10

کچھ نہیں جز طلسمِ خواب و خیال  
 گوشہٴ فقر و بزمِ سلطانی

8. Translate the following two extracts into Urdu :— 15

(a) There was once an old lady who was very deaf, and she lived on the quayside of the harbour of a very important river-mouth town. One day, when there were several warships in the harbour, a salute of ten guns was fired. The old lady was alone in the cottage. At the first report she looked up; then she stood still until the booming ceased. As the last round died away she smoothed her dress, brushed her hair back, and said sweetly, 'Please, come in'.



(b). 'New Rules to our Employees: All requests for leave of absence on account of toothache, severe colds, and minor physical ailments, etc., and on account of church picnics, weddings, and funerals, and the like, must be handed to the foreman in charge of your department before 10 a.m. on the morning of the game.'

9. Write an essay, in your own Urdu, on any one of the following subjects :— 20

(a) Duty :—(i) definition; (ii) pleasant and unpleasant duties; (iii) school-boys' chief duties—obedience to parents and teachers—hard work—truthfulness—honesty—punctuality, etc.

(b) Any city you have visited :—(i) its various aspects; (ii) your own impression of it.

(c) Sher Shāh :—(i) his rise to power; (ii) his works for public welfare.

## MARATHI VERNACULAR

*Paper-Setters*—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
MAHAMAHOPADHYAY PANDIT SITARAM SASTRI

*Examiner*—MAHAMAHOPADHYAY PANDIT SITARAM SASTRI

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay in Marathi on any one of the following :— 20

(a) A character-sketch of an acquaintance.

(b) How to be happy.

(c) Our duties to animals.

2. Translate one of the following into Marathi :— 15

It is likely that Asoka's compassion for suffering and his determination not to increase the woes of men by waging war were strengthened by his conversion to Buddhism, which dates from about this time. Buddhism teaches men to think of others before themselves, and to try to alleviate the sufferings of the world. It was in Asoka's own kingdom of Magadha that Gautama Buddha nearly 300 years before had preached his doctrine; it was fitting that a ruler of Magadha should now make the moral law of Buddha into the law of the state, and should send the yellow-robed missionaries to preach far and wide throughout the East.

3. What do you think of महादेव गोविंद रानडे as a man? 10

4. Write a description of how the fort Kondana was captured by the Marathas.

5. Explain in Marathi the following :—

20

आधीच नैषधकथा नवनीतभेळा  
होता अलंकरणरूप ह्दया जिभेळा ॥  
हंसोदये विघरतां अधरीं धरीते  
स्सीकारितां वचन मग आदरीते ॥१॥  
न रंजे कारंजे निरखुनि फगीते फणफणी  
मुदेने मोदेना नल्लगुणगणीं जे गुणगुणी ॥  
न वैसे जे सेजेवरि न परिसे जे शुक्रगिरा  
न नाहे मानाहे न धरि लळना हेतु दुसरा ॥२॥

6. Parse the following :—

10

मनाचा मोकळेपणा मनुष्याने अवश्य ठेवावा ।

7. Give the sense of the following :—

15

तालीमखान्यांत जाऊन दंड काढावे. दिवसे दिवस शक्ति अन्वये चढते दंड असावे. बरोबर समवयी मुलें पांच चार संभावितांची असावीं व जेठी एक दोघे विश्वासूक गृहस्थ बरोबर नेहमीं असावयाचे ते असावे खिसमतगार कार्यकारण असावे. जेठी यांनीं कुस्तीचे डाव शिकडावे. नंतर समवयी मुलांसुद्धां प्रकृतिस जो खुराक मानेल तो नेमें करून घेत जावा.

## GUJARATI VERNACULAR

*Paper-Setters*—{ DR. I. J. S. TARAPOREWALA, B.A., PH.D.  
PANDIT HARGOVIND DAS SETH

*Examiner*—PANDIT HARGOVIND DAS SETH

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. નીચેના મથાળાંવાલી વાતાંઓ પેઢી એકને તમારા પોતાના શબ્દોમાં 15 લખો :—

- (ક) કેન્દ્ર અને દરબારીઓ.
- (ખ) બાઈઓનો સ્નેહ.
- (ગ) અશ્વત્થામા અને દ્રૌપદી.

2. નીચેની કડીઓનો અર્થ લખો અને તે તમારા પાઠ્ય પુસ્તકમાં કયે 15 સ્થળે આવેલ છે તે જણાવો :—

- (ક) હુવન ત્રણમાં રહ્યો પૂરી, પૂર્ણ સ્વયં પરમાત્મા ;  
પોતે તો પિયુષ નિરંતર, પણ ભેદ દેખે બાતમાં.
- (ખ) શીતતણી વ્યાપત હોય ઘણી, સંગત કીજે વહિ તણી ;  
તો હિમે કંપે નહિ અંગ, એમ કરે સજ્જનનો સંગ.
- (ગ) નીલગિરિ શિખરે ગરૂડસમો, ચહુડી કોની પીઠે બેસું ;  
રણકાસમ ત્યાંજ માનતો, કર્ણધ્વજને ખેંચું.

3. નીચે આપેલા ફકરાનો સારાંશ લખો :—

જે ક્ષમાથી સામે માણસ બગડતો હોય તો ક્ષમા સારી નહિ. 15  
સામાને બગાડી ને પોતે સદ્ગુણ ધારણ કરવો એ સ્વાર્થી સદ્ગુણ છે. પણ ક્ષમામાં સામા માણસને સુધારવાની અલૌકિક શક્તિ છે. કાં તો સામે માણસ એકદમ લજવાઈને સુધરી જાય છે કે થોડીક વારમાં ઠાકર ખાઈને તે જરૂર લીય પડે છે. અથવા તો જોમ પોલીસ ગુમડાના બગાડને બહાર ખેંચી લાવે છે તેમ ક્ષમા દુષ્ટતાને બહાર ખેંચી કાઢે છે—અને તેથી ન્યારે દેખાવમાં દુષ્ટતા વધેલી લાગે છે તે વખતે પણ ખરૂં જતાં એનો અંત પાસે જ હોય છે,

4. નીચેના શબ્દોનો અર્થ લખો અને તે દરેક શબ્દને તમારા પૈતાના 10 ખનાવેલા જુદા જુદા વાક્યોમાં વાપરી દેખાડો :—

દુર્વસન, મંત્રીશ્વર, અર્વાચીન, મર્મભેદક, ઓદારસીન્ય.

5. નીચે લખેલા વિષયોમાંથી એકપર આસરે બે પાનાં જટલો 20 નિબંધ લખો :—

(ક) શૂરવીર કોને કહેવો?

(ખ) કુરસતનો સમય કેમ ગાળવો?

(ગ) મારી નિશાળ.

6. તમારાં કાવ્યપુસ્તકમાંથી કયા કવિની કૃતિઓ તમને વધુ ગમેછે તે 10 લખી તે ગમવાનાં કારણ દર્શાવો અને એક કાવ્યનો ટુંક સાર આપો.

7. નીચેના અંગ્રેજીનું ગુજરાતીમાં ભાષાંતર કરો :—

15

In 1806, at the age of 38, he decided to start his own business, and bought a ship named *Suleiman* for a lac and a half of rupees. He exported cotton to China in this ship and amassed wealth in a short time. In 1811 he opened a branch in Calcutta, then in Madras, and soon afterwards in London. In 1819 his business had grown so extensive that he gave away the Calcutta branch to his brother. This latter, in his turn, became very successful. He had thirty-six merchant vessels. He was a friend of the Governor-General and of Maharshi Tagore, and he was rightly called 'the Merchant-Prince of the East.'

## MANIPURI VERNACULAR

*Paper-Setter*—MR. SANJIBAN NADIA SINGH

*Examiner*—MR. RAJKUMAR SETHU SINGH, B.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Give a brief account of the scientific explanation of **અજ્ઞાન** as described in your text book. 10

2. Explain **જિજ્ઞાસિ વિજિજ્ઞાસિ** or the man who has won fame lives 10 eternally.

3. Either, (a) Explain that the name of Horatio Nelson was written 10 in letters of gold at Trafalgar.

Or, (b) Illustrate how forgiveness conquers vicious characters. 10

4. Explain any *two* of the following with reference to the context :— 5+5

(a) “মহারাজ যথী অমতগী দমক ধরাই ধাবদি মতিক ওইদে ; মহারাজনা হিংহনা লৈরবদি প্রজাশিং নত্রগা অসিগুধা যথী কয়গীহু কান্নবা যাই” ।

(b) যমানা মচা পুয়মক কোরহনা হাইরকই “নখোইগী ময়কতা অহানবা পাবা ওধা মীনা মীনা লাইরিক অসি ফংগনি” ।

(c) “অহিংসা পরম ধর্ম” হাঙ্গিবা মহাককী অহানবা বীণা খোজেল-দগীহু হুংশিরবা অখুধা পাওতাক অহু হেক তাবদা কনানা শুদ্ধতবা ওধগে ?

5. Amplify any *one* of the following :—

(a) অবাঁবা মচা লেমা মাংদে ।  
রাজরকপা মমল মই চারৈ ॥

(b) অঙাং ওইরিঙৈদা নোকখেহুনা লেনবদো ।  
অহল ওইরগা কপ্ লাওহুনা শিবা উইবনি ॥

6. Translate any *one* of the following extracts into Manipuri :—

(a) Feeling very angry, he resolved to lay a complaint before a magistrate. Having arrived at the court he thus addressed the judge :— 15  
‘My lord! look at the sad state I am in. I was attacked and beaten on the high road by a wicked man, who has also robbed me of my bag of gold, all that I possessed in the world. In mercy have pity on me and arrest the thief.’

(b) You may fancy how glad this good wife was to see him come home safe and sound, and how the little girl clapped her hands, and laughed with delight, when she saw the pretty toys her father had brought for her. He had much to tell of all the wonderful things he had seen upon the journey and in the town itself. 15

7. (a) Construct short sentences with any *five* of the following words :— 5

(i) শেনগম, (ii) শিগুমকী, (iii) যারেল, (iv) চিনকুপা,  
(v) শিদনাদমাই, (vi) নিংখোদা ইরেল ।

- (b) Re-write the following extract in chaste Manipuri, correcting errors where necessary :— 5

প্রেমানন্দনা শিরমদাইগী কঠবিরয় য়োরকুবা মতমদা মচাশিং  
য়েংলহুনা হাই :—“ইচাশা! ইপানা শিথুবা মতুংদা নপা নচা নখোই  
য়াম্ যাম্ দৈন শুনহুনা হুংডাইনা পাল্লু। ইপানা নরজা ইমিং পেন্না  
য়েংগে।”

8. Write an essay on any *one* of the following subjects :—

20

- (a) The advantages of school company  
(b) How you spent the last Doljatra holidays.  
(c) The evils of smoking.

## KHASI VERNACULAR

*Paper-Setter and Examiner—MR. ROY ROWLAND THOMAS, M.A.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into Khasi :— 15

When mankind first came to live upon the earth, the Great God saw fit to walk abroad in their midst frequently, and permitted them to hold converse with Him on matters pertaining to their duties and their welfare. At one time the discourse turned on the terrible consequences of disobedience, which caused punishment to fall, not only on the transgressor himself, but upon the entire human race also.

2. Compose sentences in Khasi, illustrating the use of any five of the following :—*Khum-khum, Ktur-ktur, Kynjlar, Siw-siw, Poit-poit, Wai-wot, Thor-thor* 10

3. Explain in Khasi with reference to the context :— 15

Ah, don ban plie ka khyrdop khim,  
Ia nga ban shim ruh shapoh ?

4. Explain two of the following :—*I sim lai dieng ; Ka sharyntoh ; Ka niangthangdoh.* 10

5. Explain the following in Khasi, giving illustrations :— 10

(a) Ka pla ne u saipan uba thylli u kjit ia ka khmat ban pynsyrti.

(b) Ka um bad ka ding ki long ki shakri kiba bha, hynrei ki kynrad kiba sniew tam.

6. Explain in Khasi with reference to the context :— 10

Kiba shida ki iap ha ki ktien jali jong kiba sianti.

7. Write in Khasi from your text about *U Khnam.* 10

8. Write an essay on one of the following subjects in Khasi :— 20

(a) School discipline.

(b) Physical exercise.

(c) Studiousness.

## GARO VERNACULAR

*Paper-Setter and Examiner—MR. F. W. HARDING, B.A.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Answer in Garo four only of the following questions :— 40

(a) Tell the story of the betrothal of Isaac and Rebekah.

(b) Tell the story of the *Matgitchak aro Sepru.*

(c) Describe the character of Esau, and illustrate by incidents from his life.

(d) State briefly the Ten Commandments of Moses.

(e) State very briefly who or what are the following :—*Bildad, Goshen, Matchdurang, Moriah, Potiphar, Luke, Sodom, Simeon, Corinth, Chongchongminda.*

## 2. Give a brief summary in Garo of the following :—

15

You can also learn a great deal about human nature by studying the crowd of persons who are at the booking window, pushing and crushing one another, with pickpockets waiting to snatch a purse in the rush. There you will often come across that new personality, the Indian with the English language issuing from his mouth in faultless accent, pushing aside the crowd, and perhaps trampling upon the bare feet of the poor persons with his boots, and what is more, buying the very same third-class ticket for which the poor Indians have been waiting and fighting with each other! The railway clerk will also readily give this person his ticket, seeing his dress and hearing his English accent! The idea that that educated person is acting in a most petty way does not at all enter his swollen head. I am told that in England, which I have not visited, such is not the case. Even the highest of persons, if they come late, will only take a vacant place in the line, whether it is to buy a ticket or to enter a cinema, public meeting, or railway train. That, I cannot but admit, is not the case in India as far as I have seen and as far as I have inquired. It is the duty of all truly educated to act with courtesy and consideration for the rights and comfort of others in this ancient land of India. A truly educated man anywhere in the world will always observe this standard of gentlemanly conduct.

## 3. Translate into Garo the following passages :—

1

- (a) But ask now the beasts and they shall teach thee;  
And the birds of the heavens, and they shall tell thee;  
Or speak to the earth, and it shall teach thee;  
And the fishes of the sea shall declare unto thee.  
Who knoweth not in all these,  
That the hand of Jehovah hath wrought this,  
In whose hand is the soul of every living thing,  
And the breath of all mankind?

(b) Lay not up for yourselves treasures upon earth, where moth and rust consume, and where thieves break through and steal: but lay up for yourselves treasures in heaven, where neither moth nor rust doth consume, and where thieves do not break through nor steal, for where thy treasure is, there will thy heart be also.

(c) If I speak with the tongues of men and of angels, but have not love, I am become sounding brass, or a clanging cymbal. And if I have the gift of prophecy, and know all mysteries and all knowledge; and if I have all faith, so as to remove mountains, but have not love, I am nothing; and if I bestow all my goods to feed the poor, and if I give my body to be burned, but have not love, it profiteth me nothing.

## 4. Answer four only of the following :—

12

- (a) When is *uamang* used and when *warang*?  
(b) What is the difference in the use of the tense endings *-jok*, *-aha*, and *-chim* in the words *dokjok*, *dokaha*, and *dokuchim*?  
(c) What is the difference in meaning of *Ongakon* and *Ongnaba donga* and *Haida*?  
(d) Explain the force of the affix *-ke* in the sentence *Ua nangko dokake*.  
(e) What is the difference in the time implied in the endings *-on* and *-oa* in *Ua uko dakon* and *Ua uko dako*?

## 5. Write an essay of from 200 to 300 words on one only of the following subjects :—

- (a) My favourite hero.  
(b) A hunting experience in the jungle.  
(c) The cultivation of Garo cotton.  
(d) How a Garo house is built.

## LUSHAI VERNACULAR

*Paper-Setter and Examiner—REV. E. L. MENDUS, B.A.**Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks**FIVE questions only to be answered*

1. 'Mipa naupang kawi neih thu ' ziaak la : engnge min zirtir? 20
2. Thawnthu pahnih, a hnuaia thu te ti fah thei chu kim takin ziaak 20  
la : 'I tih apiang chu, i theihtawpin ti rawh.'  
'Mi-in thil ti turin a lutukin in ring suhse.'
3. Mizo hla i duh ber pakhat ziaak la a thatzia leh a mawizia hrilfah 20  
r rawh.
4. (a) 'Hla' (poem) engnge ni? 20  
(b) Hla kal dan tha leh tha lo thliar la, in zir lai bu atangin  
entirna pakhat ve ve la chhuak rawh.
5. Hrilfah tua In thu emaw In Mawi emaw ziaak rawh :— 20
6. A engemaw zawk zawk ah hian essay ziaak rawh :— 20  
(a) Mizo hla.  
(b) John Bunyana lekhabu ziaaktu ropuanibzia.

## MODERN TIBETAN

*Paper-Setters—*{ *MR. KARMA SAMDON PAUL*  
*,, SATKARI MUKHERJEE, M.A.**Examiner—MR. SATKARI MUKHERJEE, M.A.*

## VERNACULAR PAPER

*Candidates are required to give their answers in their own words  
as far as practicable**The figures in the margin indicate full marks*

1. Translate into Modern Tibetan:— 40

The Tibetan woman is as good and chaste as any of her European rivals, and as a pious lady she has no equal, for we find her turning the prayer wheel and uttering as many times as possible the sacred formula of 'Om Mani Padme Hum' of the patron saint Bodhisattva Aryavalokiteshvara. If there be any woman in the world to whom religion is most dear and desirable, it is the Tibetan woman, who spends at least a few hours daily in meditating, offering worship to and sending forth sonorous words of devout admiration for, the Buddha.



If there be any Buddhist country where woman rules the home as well as the market, it is Tibet, where the fair Tibetan lady manages the shops of even Nepalese traders. There is hardly any sphere of worldly life in which the woman of Tibet does not exercise influence. She stands in sharp contrast with the modern purdanashin or veiled Hindu or Moslem woman. But for the catechu paste which she applies to protect her complexion as well as to cover her charming beauty, when visiting the lamaseries or monasteries, where the monks object to her approach with her naked complexion, she is much freer than the Indian or European lady.

2. Give a brief sketch of the life of 'King Rabsal'. 10  
 3. Explain in your own language the underlying idea of the following extracts, and show the context in which they occur. 10

གྲགས་པོ་ཁྱོད་ནི་ཐག་རིང་ལམ་ནས་འོངས།      |  
 ལ་ལྟངས་པོ་སྤར་དུ་བཞུལ་བ་ལ།      |  
 ཐང་ཆད་སྤྱི་ནི་ངལ་བར་ས་བྱར་དམ།      |  
 གང་འདོད་བཀའ་ནི་སྤར་དུ་སྤྱོལ་ཞིག་ཡང་།      |  
 ཁྱོད་ཀྱི་འདོད་པ་བདག་གིས་བསྐྱབ་ལགས་སོ།།      ||

4. Fill in the blanks in the following passage:— 10

བྱད་མེད་ཀྱི་ ——— བརྒྱད་ ——— ཤིང་ཡོན་དན་ ——— རྩན་པ་དེ་ལ་ ———  
 ཅིག་ ——— བར་རིག་སོ།།

5. Give the meanings of the following words in English, and, using them, frame short simple sentences in Modern Tibetan. 10

བེ་ད། དབྱལ་ཕོངས། འབྲན་མེད། བསམ་གསུམ། ཡོས་སྒོ།

6. Write an essay on any one of the following subjects:—

- (a) Habit.  
 (b) Dog.  
 (c) Cone.

TAMIL VERNACULAR

Paper-Setter and Examiner—RAO BAHADUR L. K. ANANTHAKRISHNA  
IYER, B.A., L.T.

*Candidates are required to give their answers in their own words as far as practicable.*

1. Give in plain Tamil the meaning of the following verses :—

- (a) வருந்தி யழைத்தாலும் வாரத வாரா  
பொருந்துவன போயினென்றோற் போகா-இருந்தேந்  
நெளம் புண்ணாக நெடுந் தூரத் தானினைது  
துஞ்வுதே மாத்நர் தொழில்.
- (b) சாதி யிரண்டொழிய வேறில்லை சாற்றுங்கால்  
நீதிவடிவா நெறிமுறையின் மெதினியில்  
இட்டார் பெரியோ ரிடாத நிழிகுலத்தோர்  
பட்டாங்கி லுள்ள்படி.
- (c) கரியொரு திங்களாறும் கானவன்முன்று நாளும்  
இரிதலைப் புற்றுநாகம் இரண்டுநாள் இரையாமன்றே  
விரிதவல வேடன் விறகுதை நரம்பை கவ்வி  
நரியனார் பட்டபாடு நாவளநாம் பட்டவே நிற்போம்.

2. “பூமி கற்பிக்கும் நீதிகள.” இந்தனீதிகளைப்பற்றி சுருக்க  
மாயி எழுதுக.

3. Write shorts in Tamil on :

- (a) அஞ்ஞாதவாசம், (b) விசுவரூபம்,
- (c) ஸ்ரீகிருஷ்ணன் தூது, (d) இராஜகுயம்.

4. Explain the context in Tamil in each of the following passages  
and give the substance of any two of them :—

- (a) வுகழ்வாரைத் தாங்கும் நிலம் போலத்த தம்மை  
இகழ்வார்ப் பொறுத்தல் தலை.
- (b) ஆண்டாண்டு தோறும்முது புண்டாலும்  
மாண்டார் வருவாரோ மாநிலத்திர் வேண்டா  
மறைவழிப் பட்ட பழி மொழி கெய்வம்.
- (c) பறைய றைந்தாந் கோடிப் பாரக்கும்.

5. Write an essay in Tamil on one of the following  
subjects :—

- (a) அரக்குமாளிகை.
- (b) மனோன்மணி.
- (c) ஏறம்பு.

6. Translate into Tamil the following passages :—

(a) Once upon a time there lived happily together a queen and a king who had twelve children—all boys. One day the king said to his consort : "If the thirteenth child should be a girl, then shall the twelve children die, that her riches may be great, and that the kingdom may fall to her alone.

(b) He then ordered twelve coffins to be made which were filled with shavings, and in each a pillow was placed, and all of them having been locked up in a room, he gave the key thereof to the queen, and bade her tell nobody about the matter.

### MALAYALAM VERNACULAR

*Candidates are required to give their answers in their own words  
as far as practicable*

1. (a) "ഭാരതം," "ഒരു വിരചിതം." ഇവയുടെ ഗ്രന്ഥകർത്താക്കന്മാർ ആരാകുന്നു. അവരിൽ ഒരുത്തന്റെ ജീവചരിത്രവും വേറെ പ്രബന്ധങ്ങളുടെ പേരുകളേയും എഴുതുക.

(b) തദ്യോജി ഒരേതന്നെ ആരായിരുന്നു. തദ്യോജി പാട്ടിന്റെ കഥാസാരം എഴുതുക.

2. താഴെ എഴുതിയ പദ്യങ്ങളുടെ അർത്ഥം സ്വന്ത മലയാളത്തിൽ എഴുതുക :—

(a) പൈതൃകപണിനിയോഗനമാകുമ്പോ

ഉത്തരം രൂപത്തെപ്പറ്റിട്ടൊ

ആരൂപമൊത്തൊരു പുരുഷനല്ലോ

ചാരവാം മച്ചിൽ കടന്നുവന്നാൻ.

(b) സോമവാരവൃതം മുടങ്ങില

നാമൊന്നും ചെയ്യാഞ്ഞിട്ടല്ലിതൊന്നും

ഉണ്ടായ പുത്രന്മാരെല്ലാം മരിച്ചുപോയി

കണ്ടാലുമെന്നുടെ കർമ്മദാക്ഷം.

(c) തദ്യോജികോമക്കുറപ്പെല്ലാൻ

പറയുന്നപ്പേട്ടക്കുറപ്പനേരം.

കുടാരം പോട്ടെന്റെ കുഞ്ഞുതാനാ !

ഉച്ചതിരിഞ്ഞാലും പൊയ്ക്കിയിത്താലും.

3. Translate into Malayalam one of the following passages :—

(a) A long while ago there lived a king whose wisdom was world-renowned. Nothing remained unknown to him, and it seemed as if the tidings of the most hidden things were borne to him through the air. But he had one strange custom. Every day at noon, when the table was quite cleared, and no one was present, his faithful servant had to bring him a dish which was covered up, and the servant himself did not know what to lay in it, and no man knew, for the king did not open it.

(b) A certain peasant had a faithful dog called Sultan. He had grown very old in his service, and had lost his teeth, so that he could not hold anything fast. One day the peasant stood with his wife at the house door and said, 'To-morrow I shall shoot old Sultan; he is no longer of any use to us.' His wife full of kindness to the poor animal replied, 'Well since he has served us so long, and so faithfully I think we may very well afford him food for the rest of his life.'

4. (a) Give the meaning of the following words :—

അന്നം, വിരിഞ്ചൻ, കാന്തമാർ, വൃകോദരൻ,

വൃഷ്ടിശോഷം, ആർത്തി.

(b) Explain the Samāsams in each of the following :—

പ്രജയാന്തകാലേ, ആത്മഗേഹേ, ചാരുമൂർത്തി,

നിലാംബരൻ.

5. Either, (a) Write in Malayalam a letter to your father or guardian about the progress of your studies and the choice of profession.

Or, (b) Describe the advantages of travel.

6. Give in Malayalam the substance of the following verse :—

കണ്ണൻ കിട്ടിയ നല്ലദിക്കുയതു കൊണ്ടുതന്നെ

സന്തുഷ്ടരായി

കുരേ വാപിശയാനരായി തുണസമം ലോകം

നിന്നപ്പൊരുമായി

അത്യാഗതിലുമിത്തനോന്നിരവസാനാനന്ദ

വും പൂണ്ടെഴും

സന്തുഷ്ടർക്കു "ശിവപ്രസാദ" മിതിക്കു

മേല്പെട്ടെന്തു കിട്ടേണ്ടതും.

## TELUGU VERNACULAR

Paper Setter—{PROF. S. RADHAKRISHNAN, KT., M.A., D.LITT.  
MR. R. C. RAU, M.A.

Examiner—MR. R. C. RAU, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. ఈ క్రింద వ్రాసిన లోకోత్పలనుదాహరించుచు వాక్యములు 10  
వ్రాయుడు :—

- (a) “బుద్ధి కర్తాను సరిచి.” (b) రామరాజ్యము.  
(c) ధర్మమే జయము. (d) పిచ్చుకపై బ్రహ్మస్త్రము

2. ఈ దిగువ వ్రాసిన పద్యమునకు తాత్పర్యము వ్రాయుడు :— 10

లోభికంటె దరిద్రుండు లోకమునను  
వేటాకండు గల్గడు భోగవిహమునను.  
కలిమి గల్గిన ఫలము లోకంబునకును  
దాని నుపయోగపఱుపంగ దగుట కాదె ?

3. సుకన్యయొక్క వృత్తాంతము గాని చ్యవనుని వృత్తాంతము 20  
గాని విపులముగా వ్రాయుడు.

4. హరిశ్చంద్రోపాఖ్యానమునందలి విశదముగు నీకులను వేర్వేరి 20  
నుడు.

5. Translate the following passage into idiomatic Telugu :—

15

The beautiful little railway station of Akkur, new model, stands in a shady grove on an arching curve of the track, like a bird on the leafy branch of a mango tree. It is a beauty spot on the short branch line from Mayavaram to Tranquebar, the queen of the Coromandel coast.

The soil is fertile. All around the vegetation is rank and luxuriant though so near the sea. The cocoanut trees peer at the sky. Giant banyan and stately mango cover the earth with a deep shade of solemn green. Life in Akkur seems a little idyll. The railway line gives it only a fresh and added charm, a snake-like beauty and fascination.

The little dots of fresh white buildings in the railway compound look like huts in a hermitage. The station seems a place for reverie, and no wonder even the trains move so dreamily, whistling a love tune to the bracing winds from the sea.

6. Write an essay in Telugu on any marriage function you have attended. 25

## KANARESE VERNACULAR

*Paper-Setter and Examiner*—MR. P. APPAJI RAO, B. Sc.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay in Kanarese on any one of the following subjects :— 20
  - (a) Motor-bus : its usefulness in offroad—advantages over railway in some respects—disadvantages due to break down or shortage of petrol.
  - (b) Life sketch of Deshbandhu C. R. Das.
  - (c) Health is the greatest asset.
  - (d) ಕೂಸು ಹುಟ್ಟುವುದಕ್ಕೆ ಮುಂಚೆ, ಕುಲಾವಿ ಹೊಲಸಿದ ಹಾಗೆ.
2. Write *three* short sentences each illustrating the use 5  
of the following words and phrases :—
  - (a) ಹೋಗು, (b) ಮತ, (c) ಅವತಾರ, (d) ಮಾರ್ಗ.
3. Write a letter (in Kanarese only) to your friend describing any 15  
factory which you may have visited in your province.
4. Translate into Kanarese the following passage :— 15
 

The College now possesses one of the finest halls in Calcutta. Those who visited the College before the reconstruction will recall that the old hall had a gloomy atmosphere owing to its low roof and that much of its space was taken up by ponderous arches and square pillars. The arches have now been removed and the old pillars replaced by slender ones, alterations which have almost doubled the floor space. Moreover the old roof has given way to a much higher one, the sides of which have been provided with a series of sky-lights. This allows of much more light entering the hall, thus enhancing its bright and cheerful aspect.
5. Write a short note (in Kanarese only) on Savitri's perseverance. 10
6. Quote from memory *ten* lines from any one of the poems you like best from Kavya Sangraha and explain why certain words therein appeal to you best.
7. Give the substance (in Kanarese) of *Sairale* in about 100 words. 15
8. Explain (in Kanarese) with reference to the context the meaning 10  
of *Bhratri-prema*.

## SINHALESE VERNACULAR

*Paper-Setter and Examiner*—REV. P. SEELANANDA

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Sinhalese any *three* of the following extracts :— 20
  - (a) At that moment Mara came there with the intention of stopping the Bodisat; and standing in the air, he exclaimed : ' Go not forth sir ! in

seven days from now the treasure-wheel will appear, and will make you Sovereign over the four continents and the two thousand adjacent Isles. Stop, O my Lord ! ' Who are you ? ' said he. ' I am Vasavatti ' was the reply.

(b) All is peace; and God has granted you this sight of your country's happiness, ere you slumber in the grove for ever. He has allowed you to behold and to partake the reward of your patriotic toils.

(c) Look always on the sunny side,  
'Twill make us happier far;  
Why should we try to find the cloud  
When brightly shines the star?

(d) So the king said to him : ' Dear Kāludāyin, as I wanted to see my son, I sent nine times a thousand men; but there is not one of them who has either come back or sent a message.'

2. Write an essay on one of the following subjects :—(a) Lanka 20  
Katha, (b) King Vijaya, (c) King Dutugamunu.

3. Explain the 'Mara Yuddha' according to 'Puṇḍarīka'. 20

4. Write notes on any two of the following :—(a) Kusa Jātaka, (b) 15  
Selalihini Sandesa, (c) Siri Rahula of Totagamurva.

5. Explain in your own words the following stanza with reference to 25  
context, and parse the underlined words :—

උතු නොව බරණ සිවුසාව වොටු නු ක්  
පැලද වෙනු මෙන් පසක් උත්  
සද සිහසුන් මැද මතු රජතුලෙන්  
පැවතෙන පිළිවෙල නො සිද  
ගනු අවසර එතර නිදු සිරිපතුල්  
මැද.

—

## BURMESE VERNACULAR

Paper-Setters—{ MAUNG WE LIN.  
,, BA, B.A.

Examiner—PROF. PE MAUNG TIN, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. (က) ကင်းဝန်မင်းကြီး ပြင်သစ်နိုင်ငံသွား နေ့စဉ်မှတ်စာတမ်း 40  
တွင်ရေးသားထားသည်စာသွားအတိုင်းပါရစ်မြို့သို့ရောက်သောအခါ  
တွေ့ရှိဖြစ်ပျက်သောအကြောင်းများကိုရေးသားပါ။ ။ သို့မဟုတ် ။

ကင်းဝန်မင်းကြီး ပြင်သစ်နိုင်ငံသွားနေ့စဉ်မှတ်စာတမ်း တွင်ရေး  
သားထားသည်အတိုင်း၊ ရန်ကုန်မြို့သို့ဆိုက်ရောက်ပြီးခရီး ဆက်လက်  
ဤသွား ရာ၊ ပါရစ်မြို့သို့ရောက်သည်အထိ၊ ခရီးစဉ်အဖြစ်အပျက်  
အကြောင်းအရာများကိုရေးသားပါ။

(ခ) ရွှေပြည်ဖိုးဝတ္ထုသည်ကား၊ မိဘတို့၏ ဂုဏ်ကျေးဇူး  
တော်သည်ကြီးကျယ်မြင့်မြတ်ကြောင်း၊ အမျိုးအနွယ်ကိုစောင့်ရှောက်  
အပ်သော ဝံသာနရက္ခိတတရား အကြောင်းများကိုဖော်ပြသည်အချက်  
များ ပါရှိသောဝတ္ထုဖြစ်ကြောင်း သက်သေသဒကနှင့်တကွရေး သား  
ဖော်ပြပါ။ ။

(ဂ) ဩဝါဒထူးပျို့အရ၊ လောက၌မတင့် တယ်ရာသော  
အကြောင်းများကိုရေးသားဖော်ပြပါ။ မည်သည်အကြောင်းကြောင့်  
မတင့်တယ်ခြင်းဖြစ်သည်ဟုရှင်းလင်း၍ပြပါ။

(ဃ) အောက်ပါစာပိုဒ်အရဆိုသောစကား များ မှာမည်  
သူကမည်သို့သောအကြောင်းနှင့်စပ်လျဉ်း၍ပြောဆိုကြောင်းရေးသား  
ပါ။ ။ ထိုစာပိုဒ်တွင်မျဉ်း သား ထားသောစကားတို့၏အနက်အဓိပ္ပာယ်  
ကိုဖော်ပြပါ။

ကမ္ဘာတည်ဦး၊ ပကတူးက၊ ဘီလူးထောင်တည်၊ ဒေဝကုမ္ဘန်၊  
နောက်ထပ်စံသည်၊ နိုင်ငံပြည်သည်၊ စည်ပင်ပါပေ၊ လေးမျက်နှာ  
ပတ်ခြံ၊ ကျုံးတထပ်အရံ၊ ခိုနန်းမြှောင့်အချိုး၊ သံတံတိုင်းမြို့ရိုးနှင့်၊



ဖြူး၍သာလျှံရော၊ ရေနပ်ပါဥယျာဉ်၊ တောင်ကွေ့ကာချပ်ရစ်၍၊  
မြိုင်မြိုင်နှင့်မယှဉ်၊ အစဉ်သင့် အလိုက်သင့်၊ တုပိကာပြာသာဒ်နှင့်၊  
ဘုံအထပ်မဆင့်၊ ဥကင်မြင့်ဆောက် လုပ်လည်း၊ စမှတ်ကတလွဲ၊  
လူ့ပြည်နှင့်နတ်တကွ၊ သူရဲပြေးသူရဲဝင်။ ပဟိရ်စင်နာရီဟောင်း၊  
ပြအိုးပါတန်ဆောင်းနှင့်၊ ဝက်ခေါင်းလည်းမမြင်၊ ဘာသာစရိုက်၊  
ဘီလူးမင်း စိတ်ကြိုက်မို့၊ အလိုက်ဖြင့်ယဉ်ပါပေသို့၊ ရာတွင်အတွေး၊  
ငါ့အရှင်အရေးကို၊ ဆေးလေးကိစ္စ၊ အစ်မတော်သတင်းကို၊ ချက်ခြင်း  
ကြားရအောင်၊ နန္ဒာဘွယ်ရာ၊ နတ်စက္ခုသောတာနှင့်၊ တော်ရာက  
ကြည့်ရဦးတော့မည်။

2. အောက်ပါလင်္ကာစာ ပိုဒ်၏ အနုတ်အဓိပ္ပာယ်ကိုရှင်း လင်း : 15  
ဖော်ပြပါ.

ဒါနသီလ၊ နိစ္စမကျန်၊ မိဋ္ဌန်ရှင်ပြီး၊ စောင့်သောကျိုးလျှင်  
မစိုးမရိမ်၊ စည်းစိမ်ခိုင်ပြီး၊ ရည်တိုင်းပြီးမှု၊ ဆွေနှီးမျိုးစပ်၊ ထက်ကြပ်  
မကင်း၊ ကျေးရင်းကျန်ချာ၊ မေတ္တာစိတ်ဝင်၊ တိုင်ပင်နှိုင်းချက်၊ ပေါင်၊  
ဖက်တူနေ၊ အဆွေခင်ပွန်း၊ လူရဟန်းအား၊ သိမ်းမြန်းကြည့်ရှု၊  
သင်္ဂြိုဟ်မှုလည်း၊ ကခုမကျန်၊ သဘောမှန်လျက်၊ သူမွန်တကာ၊ စဉ်  
လာရှေးလင်း၊ ကျင့်မြတ်မ်းဖြင့်၊ စိတ်ဝမ်းမြောင့်စင်း၊ ကြည်စေမင်း။

3. Translate into Burmese :—

15

A father was very much troubled to see that his son was in the habit of spending his time in the company of boys of bad habits and evil ways. He therefore tried the following plan to impress upon his mind the facts that 'Evil communications corrupt good manners' and 'You cannot touch pitch and not be defiled'. He purchased one morning a dozen very fine large ripe mangoes of the most tempting appearance, and showing them to his son, said, 'These shall all be yours to-morrow evening,' and then put them away in a cupboard after placing a rotten one in their midst. When the son came for the fruit next evening, he found he could enjoy none of them, for all were as rotten as the bad one which had touched and spoiled them. 'In the same way, my son,' said the father, 'you will soon be spoiled and ruined by bad companions.' The boy was so impressed by the quick rotting of the good fruit that touched the bad, that he ceased to go with evil companions.

4. အောက်ပါစုံတွဲစကားတို့၏အနက်အဓိပ္ပာယ်ကွဲခြားပုံကိုရှင်းလင်းဖော်ပြပါ။ 10

- (က) ဥပမာနှင့် ဥဒါဟရဏ်
- (ခ) ဋ္ဌါနနှင့်ဋ္ဌါနီ
- (ဂ) ရဂံနှင့်မြိုင်
- (ဃ) အမျိုးနှင့် အဆွေ
- (င) ကျေးတော်မျိုး နှင့် ကျွန်တော်မျိုး

5. အောက်ပါအကြောင်းကိုစာစီကုံးပါ 20

မြို့ကြီးများ၌နေထိုင်ရခြင်း၏အကျိုးကျေးဇူး

(က) မြို့ကြီး များ သည်သင့်တင့် လျောက်ဖတ်သောအရပ်ဖြစ်ခြင်း။

(ခ) ခံစား နိုင်သည့်အကျိုး ကျေးဇူးများ— ပညာသင်ကျောင်းကြီးများ— ပိဋကတ်တိုက်များ— အလုပ်အထိုင်ကြီးများ— ဗဟုသုတပွားများရှိသောအကြောင်းအမျိုးမျိုး။

(ဂ) ကူးသန်းရောင်းဝယ်ရာ၌ကြီးပွားနိုင်ခြင်း— အရပ်ရပ်အရွာရွာသို့အသွားအလာလွယ်ကူခြင်း။

(ဃ) အသင်းအပင်း အပေါင်း အဘော်များခြင်း— စိတ်ကြည်လင်ရန်အကြောင်းဖြစ်ခြင်း—တိုင်ပင်ရန်မိတ်ဆွေကောင်း ပညာရှိများတွေ့ရခြင်း။

(င) လူတို့သုံး ဆောင်မျိုး ဟူသမျှအလွယ်တကူရနိုင်ခြင်း— အနေအထိုင် သန့်ရှင်းခြင်း— မကျမ္မာသောအခါလွယ်လင့် တကူဆရာကောင်းဆေးကောင်းတို့၏အထောက်အပံ့ကိုရနိုင်ခြင်း။

(စ) ကျေးဇူးများသော်လည်း သတိတရားကိုလက်လွှတ်ဘဲနေမှသာအကျိုးရှိခြင်း။

## PORTUGUESE VERNACULAR

*Paper-Setter and Examiner—DR. P. D. BRAGANCA CUNHA.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Give in your own words the meaning contained in the following verses of Guerra Junqueiro :— 20

A fome e a Dor escaveiradas  
Ululam roucas nas estradas,  
Irmãs sinistras de mãos dadas . . .  
Misericórdia ! Misericórdia !  
Na escuridão, entre lufadas,  
Que pavorosas debandadas  
De multidões desordenadas . . .  
Misericórdia ! Misericórdia !  
Turbas gemendo esfarrapadas,  
Por ventanias e nevadas,  
Filhos ao colo, ao ombro enxadas,  
Sem luz, sem pão e sem moradas ! . . .  
Misericórdia ! Misericórdia !

2. Write a short essay in Portuguese about 'Patriotism'. 30

3. Translate the following passage :— 25

. . . Oh ! Que engenhosa besta, esse Schopenhauer ! E maior besta eu, que o sorvia, que me desolava com sinceridade ! E todavia, . . . continuava elle, remexendo a chavena . . . o Pessimismo é uma theoria bem consoladora para os que soffrem, porque desindividualisa o soffrimento, alarga-o até o tornar uma lei universal, a lei própria da Vida : portanto lhe tira o character pungente d'uma injustiça especial, commettida contra o soffredor por um Destino inimigo e faccioso ! Realmente o nosso mal sobretudo nos amarga quando contemplamos ou imaginamos o bem do nosso visinho : porque nos sentimos escolhidos e destacados para a infelicidade, podendo, como elle, ter nascido para a fortuna. Quem se queixaria de ser côxo . . . se toda a humanidade coxeasse ?

4. Give the meaning of the following words :—o guarda, a guarda ; o cabeça, a cabeça ; o planêta, a planêta ; o trombêta, a trombêta ; o cornêta, a cornêta ; o rogal, a rogal ; o crescente, a crescente. 10

5. Express the following interjections in Portuguese :— 15

Go on ! Come here ! Give way ! Take this ! Hark ! Listen to me ! Begone ! away ! Be quick ! Let us go on ! Go on ! move ! Stop !

## MODERN ARMENIAN VERNACULAR

*Paper-Setters*—{MR. ZEBEDEE HANANIAN  
,, S. MIHIGIAN

*Examiner*—MR. ZEBEDEE HANANIAN

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Write in Modern Armenian the answers to the following questions :— 40

(a) Բ-ա. Ո՞չ է Սիբայէլ Վալբանդեան.

Բ. Ի՞նչ տքսակ երկեր ունի.

Գ. Ի՞նչ տարբերութիւն ես տեսնում իր լեզուի  
և արդի Վրեւելիան բարբառի միջեւ.

Դ. Ի՞նչ ազդեցութիւն են ունեցել իր ոտանաւ-  
որները.

(b) ա. Ո՞չ է Վեհիս Վհարոնեան.

Բ. Ի՞նչ ազգային գործունէութիւն է ունեցել.

Գ. Ի՞նչ երկեր ունի. յիշիր մի քանիս.

Դ. Ի՞նչպէս է իր ոճն ու լեզունը.

Ե. Ի՞նչ ազդեցութիւն է թողնում ընթերցողի  
վրայ իր ուէ երկ.

(c) ա. Ո՞չ է Շուշանիկ Կուրդինեան.

Բ. Ի՞նչ տեսակ գրութիւններ ունի. յիշիր մի  
քանիս.

Գ. Ի՞նչպէս է իր լեզունն ու ոճը.

(d) ա. Ո՞չ է Շիրանզադէ.

Բ. Ի՞նչ տեսակ գործեր ունի. յիշիր մի քանիս.

Գ. Ի՞նչ տեսակ գրող է.

2. Translate into Modern Armenian :—

15

Never! I drink water, which costs nothing. Drunken days have all their to-morrows as the old proverb says. I spare myself sore heads and shaky hands, and save my pennies. Drinking water neither makes a man sick nor in debt, nor his wife a widow. And that, let me tell you, makes a considerable difference in our out-go. It may amount to half-a-crown a week, or seven pounds a year. That seven pounds will clothe the myself and children, while you are out at elbows and your children go barefoot.

## 3. Translate into English :—

15

- (a) Ի՛նչ, մընաք բարոյի, Լստուած և արեւ,  
 Որ կը պըլպըլաք իմ հոգւոյս վերեւ . . .  
 Լստողմ՝ աչ ես կերթամ յաւելուչ երկնից,  
 Լսապերն ի՞նչ, են որ եթէ ոչ անբիծ  
 Եւ թըշառ ողւոց անէծք ողբադին.  
 Որք թըռին այրել ճակատն երկնքին.
- (b) Լս՛ի, տէք ինձ քաղցր ձիւքուն,  
 Կեանքից հեռո՛ւ սլանամ  
 Լսյն աշխարհը, ուր խնդուծիւն,  
 Ու սէրն է միշտ անթառամ:  
 Վնքուչ վարդերն ինձ բարձ լինի՛ն.  
 Վառ կանաչից ինձ վերմակ,  
 Լոցա բոյրը զարթապի՛ն  
 Կծեմ անվերջ ես անյագ . .

## 4. Answer in Modern Armenian :—

10

- ա. Ի՞նչ տարրական կանոններ նկատի առնելու ենք մի նամակ գրելիս.
- բ. Ո՞ր ընտանեկան նամակ գրելիս ինչ՞ տեսակ լեզու ու ո՞՞ր գործ ենք ածելու.
- գ. Ի՞նչ տեսակ լեզու և ո՞՞ր գործ ենք ածելու մի տեւարան նկարագրելիս . օրինակ՝ արշալոյս, վերջալոյս և այլն.
- դ. Ի՞նչ տեսակ լեզու և ո՞՞ր գործ ենք ածելու մի լուրջ նիւթի մասին գրելիս. ( ) օրինակ՝ նկարագրիր յարատեւութիւն և այլն.

## 5. Write an essay in Modern Armenian on any one of 20 the following subjects :—

- (a) Երատեւութիւն.
- (b) Հայաստան և Հայեր.
- (c) Հնդկայ գաղութի ապագան.

## ENGLISH

## ALTERNATIVE PAPER

*Paper-Setters*— { Mr. P. E. DUSTOOR, M.A.  
 „ A. K. CHANDA, M.A.

*Examiner*—Mr. H. C. CLARIDGE, B.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Write a short essay on one of the following subjects :— 20  
 (a) Patriotism.  
 (b) Health is Wealth.  
 (c) The Evils of War.  
 Or, Write a letter to a friend describing life in *either* (a) a village,  
 or (b) a big city.
2. *Either*, (a) Expand the thought contained in *one* of the following 16  
 passages, with or without reference to the poem in which it occurs :—  
 (i) My crust, through hunger, food divine,  
 Not Jove himself would waste it ;  
 And every brook is full of wine  
 When one has wit to taste it.  
 (ii) The sea hath its pearls,  
 The heaven hath its stars ;  
 But my heart, my heart,  
 My heart hath its love.  
 Or, (b) Select *one* of the following quotations and tell in simple  
 English the story contained in the poem from which it is taken :—  
 (i) No stir in the air, no stir in the sea,  
 The ship was still as she could be,  
 Her sails from heaven received no motion,  
 Her keel was steady in the ocean.  
 (ii) With a grasp by love and by fear made strong,  
 He held her fast, and he held her long ;  
 With the beating heart of a bird afear'd,  
 She hid her face in his flame-red beard.
3. Give in your own words the story of *EITHER The Riddle of Countess 20*  
*Runa*, or A Tradition of Eighteen Hundred and Four.
4. Choose *one* of the following passages and (i) give the substance 14  
 of it, (ii) express in a single sentence its main thought :—  
 (a) What is the course of the life  
 Of mortal men on the earth ?—  
 Most men eddy about  
 Here and there—eat and drink,  
 Chatter and love and hate,  
 Gather and squander, are raised  
 Aloft, are hurl'd in the dust,  
 Strive blindly, achieving  
 Nothing ; and then they die—  
 Perish ; and no one asks  
 Who or what they have been,

More than he asks what waves,  
 In the moonlit solitudes mild  
 Of the mildest Ocean have swell'd,  
 Foamed for a moment, and gone.

- (b) The poetry of earth is never dead :  
 When all the birds are faint with the hot sun,  
 And hide in cooling trees, a voice will run,  
 From hedge to hedge about the new-mown mead ;  
 That is the Grasshopper's—he takes the lead  
 In summer luxury—he has never done  
 With his delights : for, when tired out with fun,  
 He rests at ease beneath some pleasant weed  
 The poetry of earth is ceasing never :  
 On a lone winter evening, when the frost  
 Has wrought a silence, from the stove there shrills  
 The Cricket's song, in warmth increasing ever,  
 And seems to one in drowsiness half lost,  
 The Grasshopper's among some grassy hills.

5. Give the substance of *one* of the following passages, bringing out clearly the main idea :— 14

(a) No mortal has a right to wag his tongue, much less to wag his pen, without saying something; he knows not what mischief he does, past computation, scattering words without meaning, to afflict the whole world yet before they cease. Shiploads of fashionable novels, sentimental rhymes, tragedies, farces, tales by flood and field are swallowed monthly into the bottomless pool; still does the press toil, and still in torrents rushes on the great army of publications to their final home; and still oblivion, like the grave, cries give! give! How is it that of all these countless multitudes no one can produce ought that shall endure longer than snowflake on the river? Because they are foam, because there is no reality in them. Not by printing-ink alone does man live. Literature, as followed at present, is but a species of brewing or cooking, where the cooks use poison and vend it by telling innumerable lies.

(b) In seeking to gain knowledge of our soul, there is no need to denounce or neglect our body; we are merely to put the proper valuation upon both. We must cherish the soul as the soul should be cherished, and we must also treat the body as the body should be treated—as an instrument in the hands of the soul. Only the one who is able to do this accomplishes the purpose of life. Those who merely follow the whims and appetites of the body miss both the Here and the Hereafter. Do not think, when we are trying to make the most of this life by getting all we can of physical satisfaction and enjoyment, that we are gaining anything. We are the gainers only when we sacrifice the pleasures of this life in order to find that which connects us with the unseen realm; and when we do this, we actually gain more in our present life, because we learn how to live with understanding and how to face death fearlessly. That is the proof of the true Knower—to be able to meet death as only a change of garment.

6. Scan any *two* of the following passages, and discuss the figures of speech in the passages chosen by you :— 16

- (a) Mortals, that would follow me,  
 Love Virtue, she alone is free ;  
 She can teach ye how to climb  
 Higher than the spherie chime.
- (b) A thing of beauty is a joy for ever;  
 Its loveliness increases; it will never

Pass into nothingness, but still will keep  
 A bower quiet for us, and a sleep  
 Full of sweet dreams, and health and quiet breathing.

- (c) A wanderer is man from his birth.  
 He was born in a ship  
 On the breast of the river of Time;  
 Brimming with wonder and joy  
 He spreads out his arms to the light,  
 Rivets his gaze on the banks of the stream.

## HISTORY

*Paper-Setters*—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
 DR. UPENDRANATH GHOSHAL, M.A., PH.D.

*Head Examiner*—DR. UPENDRANATH GHOSHAL, M.A., PH.D.

- Examiners*—{ MR. BIDHUBHUSHAN SENGUPTA, M.A.  
 „ ABANINATH BASU, M.A.  
 „ RAMANIRANJAN SEN, M.A.  
 „ SURENDRAKISOR CHAKRAVARTI, M.A.  
 „ GOPALKINKAR MUKHERJEE, M.A.  
 „ ANILCHANDRA CHAUDHURI, M.A.  
 „ TARAKNATH MOOKERJEE, M.A.  
 „ NARENDRAKRISHNA SINHA, M.A.  
 „ TARAKNATH TALUKDAR, M.A.  
 „ DEBAPRASAD GHOSH, M.A.  
 „ SUDHINDRAKRISHNA DATTA, M.A.  
 „ NAZIR AHMAD, M.A.  
 „ ANNADACHARAN SEN, M.A.  
 „ SATISCHANDRA BHADURI, M.A.  
 „ MUBARAK ALI, B.A., B.T.  
 „ BIBHUDHAN RAY, M.A., B.T.  
 „ SUKUMAR BHATTACHARYYA, M.A.  
 „ NARESCHANDRA RAY, M.A.  
 (Looked over answer-papers written in  
 Vernaculars.)  
 BENGALI  
 MR. LALITMOHAN BHATTACHARYYA, M.A.  
 „ MURALIDHAR BASU, M.A.  
 „ SADHANKUMAR BANERJEE, M.A.  
 SRIMATI BINAPANI GHOSH, M.A.  
 MR. BIRENDRANATH CHAKRABARTI, M.A.  
 „ NIRMALENDU DASGUPTA, M.A.  
 „ NEPALOHANDRA RAY.  
 „ TRIDIBNATH RAY.  
 „ KARUNAKINKAR BANERJEE.  
 „ PHANIBHUSHAN MUKHERJEE.



MR. HARIHAR CHATTERJEE, M.A.  
 .. SUSILCHANDRA CHATTERJEE, M.A.  
 MISS RENUPRABHA GHOSH, B.A.

ASSAMESE

SRIJUT SURYYAKUMAR BHUIYAN, M.A.

PERSIAN

MR. A. KADER, M.A.

ARMENIAN

MR. ZEBEDEE HANANIAN

NEPALI

MR. DHARANIDHAR MISRA, B.A.

TELEGU

Examiners— } MR. B. RAMCHANDRA RAU, M.A.  
 (contd.) } BURMESE

MR. G. J. MUNRO

URIYA

REV. B. DAS, B.A.

HINDI

PANDIT DINANATH MISRA, M.A., B.L.

URDU

MR. MUHAMMAD SHAFI

MAITHILI

KUMAR GANGANAND SINGH, M.A.

MARATHI

PROF. D. R. BHANDARKAR

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Candidates are permitted to answer six questions only, at least ONE being  
 taken out of each group. Each question carries 16 marks. FOUR  
 marks are reserved for correctness of language.*

#### GROUP A

1. Give some account of the Indian expedition of Alexander the Great, and indicate its leading consequences.
2. Sketch briefly the career of Asoka after his conversion to Buddhism. Show in what sense he may be called one of the greatest kings of the world.
3. Write short notes on—Yasodharman, Yasovarman, Lalitaditya, and Pulakesin II.

#### GROUP B

4. Briefly describe the reign of Alau-ud-din Khilji with special reference to his conquests and his methods of administration.
5. Write what you know of Sher Shah as a conqueror and as a ruler.
6. In what respects was the policy of Akbar reversed by Aurangzeb, and what were the consequences of this change?

#### GROUP C

7. Describe the measure of land-revenue reform of Lord Cornwallis, and point out its principal merits and demerits.
8. Sketch the careers of any two of the following :—(a) Hyder Ali, (b) Ranjit Singh, (c) Mahadaji Sindhia.
9. Summarize the leading events of the administration of Lord Canning as Viceroy of India.

## GROUP D

10 Indicate the constitution and functions of municipalities and district as well as sub-district boards in British India at present.

11. Summarize the measures adopted by the British Indian Government for the improvement of agriculture and for protection against famines.

12. Describe the present constitution and powers of the Governors' Legislative Councils.

## GEOGRAPHY

*Paper-Setters*—{ MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.  
 „ HEMCHANDRA DASGUPTA, M.A., F.G.S.

*Head Examiner*—MR. HEMCHANDRA DASGUPTA, M.A., F.G.S.

{ MR. BENIMADHAB BHATTACHARYYA, B.A., B.T.

{ „ GANGACHARAN DASGUPTA, B.A., B.T.

„ SURESCHANDRA NIYOGI, B.T.

„ KALIKRISHNA RAKSHIT, B.T.

„ NIJARANCHANDRA RAYCHAUDHURI, B.T.

„ INDUBHUSHAN DE, B.A., B.T.

„ PRAPHULLAKUMAR SARKAR, M.A.

*Examiners*—{ „ REBATIRAMAN DE, B.Sc., B.T.

„ SASADAR BANERJEE, B.A., B.Ed.

*Geography in*

{ URDU—KHAN BAHADUR REZA ALI WASHAT.

{ HINDI—MR. SHIBNARAYAN LALA.

{ URIYA—MR. PRIYARANJAN SEN.

{ NEPALI—DR. RAJKUMAR MUKHERJEE.

{ ASSAMESE—MR. A. N. BORAH.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Distinguish between— 10

- (a) a volcano and a geyser;
- (b) the rotation and the revolution of the earth;
- (c) the latitude and the longitude of a place;
- (d) salt water and fresh water lakes.

2. Either, Explain the term *ocean currents*. Indicate how they are formed, and enumerate the factors which modify the direction of their flow. 10

*Or, Explain the formation of tides.*

3. What is meant by the scale of a map? Draw the outlines of a rectangular plot of land 150 feet long and 120 feet broad on a scale of 1 inch=20 feet. 10

4. Draw a map of India and indicate on it the positions of the following :—the Vindhyan range, the Cauvery, Lahore, Cherra-punji, and the Tapti. 10

5. (a) Describe the courses of the Indus and the Ganges, noting carefully the tributaries of each of them. 10

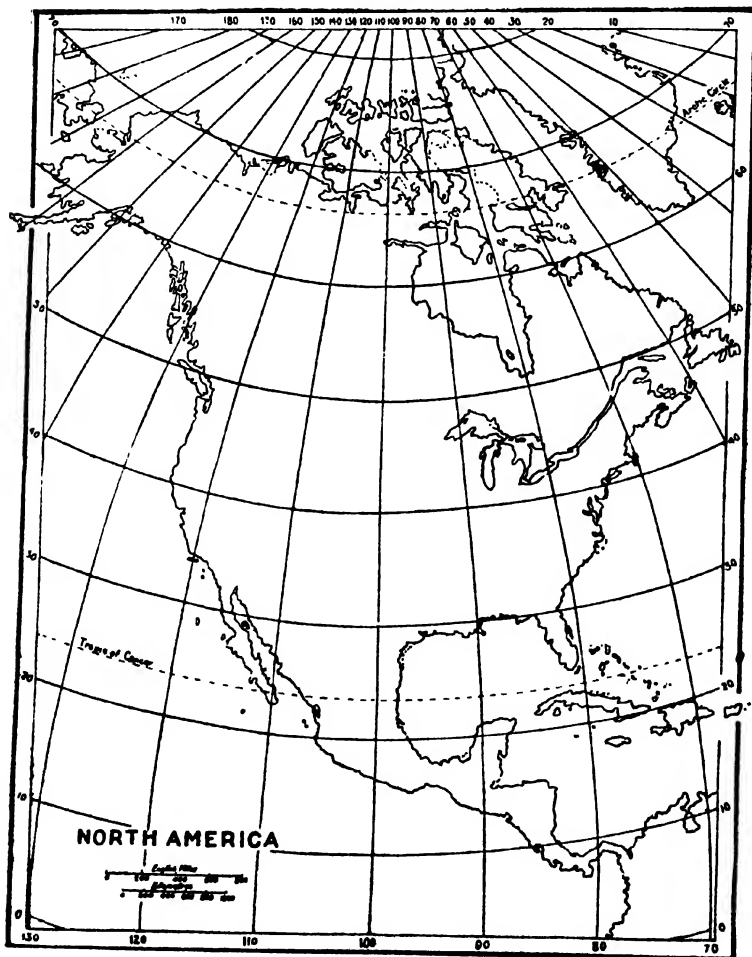
(b) Describe the surface features of any district either of Bengal or of Assam with which you are familiar, noting any place of importance within it.

6. Write short notes on the following :—Ajanta, Bankipore, Comorin, 10  
Kathiawar, Nanga Parbat, Peshawar, the Salt range, Terai, Udaipur,  
and Waltair.

7. *Either*, Give an account of the Geography of Burma under the 10  
following heads :—(a) boundaries, (b) chief mountain ranges, (c) chief  
rivers, (d) chief towns and their importance, and (e) chief mineral  
products.

*Or*, Compare the climate of the Punjab with that of the Madras  
Presidency.

8. You are supplied with an outline map of North America. Locate 10  
on it the following :—Alaska, Behring Strait, Gulf of California, Mexico,  
Michigan, the Mississippi, Newfoundland, New York, the Rocky Moun-  
tains, and Washington.



9. *Either*, Enumerate the different countries of Europe with their capitals. 10

*Or*, Give an account of the desert regions of Africa and Asia.

10. Write notes on the following :—Abyssinia, Buckingham, the Dividing Range, North Frigid Zone, Gibraltar, Isle of Man, Niagara Falls, the Panama Canal, Sheffield, and Tasmania. 10

## ELEMENTARY MECHANICS

*Paper-Setters*—{ DR. SNEHAMAY DATTA, D.Sc.  
MR. SATISCHANDRA GHOSH, M.A.

*Examiners*—{ MR. KSHETRAMOHAN GHOSH, B.Sc.  
,, SUDHANSUBADAN PANDA, M.Sc.  
,, SANTANUKUMAR MUKHERJEE, M.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any SEVEN questions*

*The questions are of equal value*

*Neatness will be taken into consideration in awarding marks*

1. Define *velocity*, *acceleration*, and *momentum*.

A stone is dropped from a balloon at a height of 400 feet above the ground, and it reaches the ground in 6 seconds. Find the velocity with which the balloon was rising.

2. Enunciate the Second Law of Motion.

Show that when proper units are chosen the measure of the force is equal to the measure of the rate of change of momentum.

Obtain the relation between a poundal and a dyne.

3. Describe Atwood's machine.

Masses of 3 lb. and 5 lb. hang over a pulley as in Atwood's machine. Find the tension of the string and the acceleration of either mass.

4. A man rows a boat through the water at the rate of 3 miles an hour in a direction  $60^\circ$  east of north, in a current flowing southwards at the rate of  $1\frac{1}{2}$  miles an hour. Show that the boat will travel due eastwards, and find its velocity.

5. Enunciate and prove the *triangle of forces*.

Show that if forces of 20 lb., 30 lb., and 50 lb. keep a particle at rest they *must* act in the same straight line.

6. A rod, 16 inches long, rests on two pegs 9 inches apart with its centre midway between them. The greatest masses that can be suspended in succession from the two ends without disturbing the equilibrium are 4 lb. and 5 lb. respectively. Find the weight of the rod and the position of the point at which its weight acts.

7. Determine the centre of gravity of a uniform triangular lamina.

If  $G$ , the centre of gravity of a triangle  $ABC$ , be joined to the extremities of the side  $BC$ , and the triangle  $BGC$  be removed, find the centre of gravity of the rest of the triangle.

8. Enunciate, and explain with illustrations, the uses of a 'machine'.  
Find the mechanical advantage in the system of pulleys in which the same string passes round all the pulleys.

9. A uniform rod, 2 feet long and of weight 3 lb., is used as a steel-yard whose fulcrum is 2 inches from one end, the sliding weight being 1 lb. Find the greatest and the least weights that can be measured.

10. Obtain the relation between the *effort* and the *weight* in the case of an 'inclined plane'.

A road rises 440 feet in a mile. Find the pull (in lb. weight) that a horse must exert on a cart weighing 6 cwt to draw it up the road.

## ELEMENTARY HYGIENE

*Paper-Setters*—{ COL. A. D. STEWART.  
MR. RAMESCHANDRA RAY, L.M.S.

*Examiners*—{ MR. RAMESCHANDRA RAY, L.M.S.  
DR. JITENDRANATH MAITRA, M.D.  
MR. B. RAMCHANDRA RAY, M.A. (*In Telugu*)

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Only five questions are to be answered*

1. Write short notes on the following terms :—(a) antiseptic, 20  
(b) damp-proof course, (c) cubic space, (d) ventilation, and (e) vitamin.
2. Describe the methods of disposal of night soil in your village or 20  
town. Discuss any defects in the system, and suggest remedies.
3. What are the evils of the tobacco habit? 20
4. Enumerate separately the diseases borne by (a) air, (b) water, and 20  
(c) insects.
5. By what characteristics can you tell whether samples of meat, fish, 20  
eggs, and milk are fresh?
6. State what your average national diet is; and then write a short 20  
essay, pointing out its merits and defects.

## BUSINESS METHOD AND CORRESPONDENCE

*Paper-Setters*—{ MR. S. R. BATLIBOI, F.S.A.A.  
MR. NARENDRANATH SARKAR, M.A.

*Examiner*—MR. S. ZAMAN, B.A., A.C.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*Attempt any two of the following questions marked with an asterisk and  
any four of the others*

*The figures in the margin indicate full marks*

1. What is a Circular Letter?

18

Sulaiman Ostagar, proprietor of an old-established tailor's shop in Ballygunj, Calcutta, has retired from the business, which has been trans-

ferred to Osman Khan, tailor, of Dhurumtolla Street, Calcutta. Write out a Circular Letter announcing the above disposal of business.

2. What is meant by 'indexing' a series of letters? 18

Give a specimen of ruling, with the proper column-heads for an index.

3. Explain how to use the telephone, and its utility in a modern business office. 18

\*4. In the form of an order cheque crossed to the Lloyds Bank, Ltd., Chowringhee Branch, write out an order made by P. Mitra on the Imperial Bank of India, Clive Street Branch, to pay Rs. 503-2-9 to Sitaram. The cheque must be complete with all details regarding Serial No., Name of Paying Bank, etc. 14

Also explain what further steps should be taken if Sitaram refuses to take a crossed cheque and wants the effect of the crossing to be removed from the above cheque.

5. Explain how to write up a three-column Cash Book, defining each column and giving at least two entries for the debit side and two for the credit side of each column. 18

6. What is Marine Insurance? 18

What does the term 'average' mean in Marine Insurance? How many kinds of average are there, and what are they?

7. How are transactions settled in a Bankers' Clearing House? 18  
Where is the Clearing House for Calcutta situated?

\*8. It is intended to convert a Partnership firm into a Private Limited Company. Describe the various steps to be taken for the purpose 14

\*9. What are the important clauses to be included in a Memorandum of Association? 14

What are the restrictions to be observed with regard to the naming of a Public Limited Company?

10. Explain the following commercial terms and abbreviations:— 18  
(a) Bill of Exchange, (b) Moratorium, (c) D/A Bill, (d) C.W.O., (e) Bill dishonoured by non-acceptance, (f) T.M.O., (g) Reserve Liability, (h) *Caveat Emptor*, (i) Factor.

\*11. What is meant by the marking of a cheque? Does it make any difference in the liability of the paying Banker whether the marking is done at the instruction of the drawer of the cheque or some other person? 14

12. Which of the following rates of exchange should be accepted by an Indian Importer who has to remit money to London:—Rs 1=1s. 5½d., £1=Rs. 13. 8 as. 6 p. ? 18

## COMMERCIAL GEOGRAPHY

*Paper-Settlers*— $\left\{ \begin{array}{l} \text{MR. MOHITKUMAR GHOSH, M.A. (CAL.),} \\ \text{B.COM. (LOND.).} \\ \text{DR. HARISCHANDRA SINHA, PH.D.} \end{array} \right.$

*Examiner*—MR. DWIJENDRAKUMAR SANYAL, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer the FIRST question and any FIVE of the rest*

*The figures in the margin indicate full marks*

1. Draw a map of India showing the areas producing cotton and wheat. 20
2. Explain fully the term—'Egypt is the gift of the Nile.' 16

3. How do you account for the following?— 16  
(a) Maize is more important than wheat in S. Africa.  
(b) Rice is more important than wheat in India.  
(c) Wool is more important than wheat in Australia.
4. Write a short essay on *tea* under the following headings :—(a) necessary conditions for cultivation, (b) principal producing areas, (c) process of manufacture, and (d) principal markets. 16
5. What do you understand by localization of an industry? What are the advantages and disadvantages of the cotton manufacturing industry being situated in Bombay? 16
6. Estimate and locate the coal resources of India. 16
7. Write a short account of the jute industry of Bengal. 16
8. Explain fully the situation of *one* large seaport in each of the following countries :—(a) Germany, (b) France, (c) Belgium, and (d) U.S.A. 16
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# Intermediate Examination

## 1932

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### ENGLISH

MR. W. C. WORDSWORTH, M.A.  
*Paper-Setters—* { „ PRAPHULLACHANDRA GHOSH, M.A.  
 „ CHARUCHANDRA BISWAS, M.A., B.L.

#### FIRST PAPER

*Head-Examiner—*MR. RABINDRANARAYAN GHOSH, M.A.

<i>Examiners—</i>	{	MISS STELLA BOSE, M.A.
		MR. MANIKUMAR MUKHERJEE.
		„ BANABIHARI DASS, M.A.
		„ ACHYUTAKUMAR DATTA, M.A.
		„ JITENDRANATH CHAKRABARTI, M.A.
		„ NRIPESHCHANDRA GUHA, M.A.
		„ DEBENDRAKUMAR SEN, M.A.
		„ HARICHARAN MUKHERJEE, M.A.
		„ SATYASARAN KHALI, M.A.
		„ SURYYAKUMAR BHUIYAN, M.A.
		„ DEBENDRANATH CHATTERJEE, M.A.
		„ PRAFULLARANJAN DHAR, M.A.
		„ PRAFULLAKUMAR DAS.
		„ BANIKANTA KAKATI, M.A.
„ BIBHUTIBHUSAN GHOSHAL, M.A.		
„ PRAFULLAKUMAR BANERJEE, M.A.		
„ SOMNATH MAITRA, M.A.		

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, What is your opinion regarding the audience addressed by Brutus and Antony? How are they influenced by these two speakers? Do you notice any difference in characterization between the four Citizens who speak? 20

*Or*, 'I am no orator as Brutus is', says Antony to the Citizens. Is that your impression after reading their speeches? Give reasons for your answer. 20

*Or*, Describe the nutting expedition of Wordsworth, and indicate the state of his mind at each stage of the adventure. 20



2 *Either*, Do you accept without qualification Allan-Bane's characterization of Roderick Dhu as a 'wild mauring chief'? Illustrate your remarks from incidents in the poem. 20

Or, So wondrous wild, the whole might seem 20  
The scenery of a fairy dream.

• Describe clearly the features of the scenery referred to, and indicate the elements that made it so charming.

3. (a) *Either*, 'One moment wait, thou holy man! 15  
On earth my crime, my death, they knew;  
My name is under all men's ban—  
' Ah, tell them of my respite too.'

To whom and on what occasion are these words addressed? Briefly narrate the story of the speaker's crime and death. What is the 'respite' he speaks of? How did he earn it?

Or, Peace hath her victories 15  
No less renowned than War.

What are the victories of peace that Milton calls upon Cromwell to achieve? Briefly refer to the circumstances that led Milton to make this appeal.

(b) *Either*, 'Fling me the picture of the fight, 15  
When met my clan the Saxon might.'

Wherein lies the pathos of this request? Indicate the striking characteristics of the description of the 'fight.'

Or, 'Nay, then, my pledge has lost its force, 15  
And stubborn justice holds her course—  
Malcolm, come forth.

Fetters and warder for the Graeme.'

Write with reference to the lines quoted above, a short note embodying the following points, after arranging them in their logical order:—(i) the speaker's mood; (ii) the feelings of those among his listeners that are directly concerned, when they hear these words and immediately after; (iii) when and where these words are spoken; (iv) the 'punishment' proposed.

4. Select three passages, and give for each (a) its context; (b) its general sense; (c) notes on words and expressions in italics and on other points, wherever specially indicated:— 30

(i) *Jore* frowned in heaven; the conscious *Parcae* threw  
Upon those *roseate* lips a *Stygian* hue.

Why did all this happen? What is the change indicated in the latter half of the passage?

(ii) And ne'er did *Grecian* chisel trace  
A *Nymph*, a *Naiad* or a *Grace*  
Of fairer form or lovelier face.

(iii) 'Little we *reck*,' said John of Brent,  
'We *Southern* men, of long descent;  
Nor *wot* we how a name—a word—  
Make *clansmen* *vassals* to a lord.'

What social conditions are contrasted in these lines?

(iv) Honour has come back, as a king, to earth,  
And paid his subjects with a royal wage;  
And Nobleness walks in our ways again,  
And we have come into our heritage.

(v) Now high on waves that idly burst  
Like Heavenly Hope she crown'd the sea,  
And now, the bloodless point reversed,  
She bore the blade of Liberty.

SECOND PAPER

Head Examiner—DR. SRIKUMAR BANERJEE, M.A., PH.D.

Examiners	{	MR. BHOLANATH CHAKRABARTI, M.A.
		„ MOHINIMOHAN MUKHERJEE, M.A.
		„ JITESHCANDRA GUHA, M.A.
		„ SOMESWARPRASAD MUKHERJEE, M.A.
		„ BATUKNATH BHATTACHARYYA, M.A.
		„ HRIDAYRANJAN LAHIRI, M.A.
		„ AMIYAKUMAR SEN, M.A.
		„ JYOTSNAMAY BOSE, M.A.
		„ JATINDRAMOHAN GHOSH, M.A.
		„ SASIKUMAR GHOSH, M.A.
		„ SUSILCHANDRA DATTA.
		„ BIJAYRANJAN DASGUPTA, M.A.
		„ BIRENDRABINOD RAY.
		„ KIRTISHCHANDRA BANERJEE.
		DR. SATYENDRAKUMAR DAS, M.A., PH.D.
		MR. BINODBIHARY BANERJEE, M.A.
		( „ JOGENDRAKUMAR CHAUDHURI, M.A., B.A. (OXON.).

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Either, Write a short essay, based on Stevenson, on—'A walking tour, and how it may be best enjoyed.' 20  
Or, Write, as concisely as you can, the story of Hamaguchi Gohei and his sacrifice. 20
2. Either, What change was wrought by Eppie in Silas Marner's life? 20  
'Silas began now to think of Raveloe life entirely in relation to Eppie.' Show how.  
Or, Give some account of any two of the following characters:— 20  
Godfrey Cass, Mrs. Dolly Winthrop, Nancy Lammeter.
3. Either, Give the substance of Macaulay's description of the English country gentlemen of the seventeenth century. 20  
Or, Show after Macaulay, that the idea that the golden age of England lies in the past is a delusion. 20
4. What is a parable? Reproduce and explain any two parables from the Bible Selections you have read. 15
5. Explain any five of the following, stating the context separately:— 25  
(5 each)

(a) To do less would class you as an object of eternal scorn : to do so much presumes the grandeur of heroism.

(b) Tell him, Ill Luck, that direful chemist, never put into his crucible a more indissoluble piece of stuff than your affectionate cousin.

(c) It is as if a good citizen in a monarchy were to pay all the taxes conscientiously, serve his time in the army, and fight the battles of his country bravely, but refuse to take off his hat to the Queen when she passed.

(d) 'And you're a doctor, I reckon, though you're only a cow-doctor—for a fly 's a fly, though it may be a boss-fly,' concluded Mr. Macey, wondering a little at his own 'cuteness.'

(e) We see no white-winged angels now. But yet men are led away from threatening destruction : a hand is put into theirs, which leads them forth gently towards a calm and bright land, so that they look no more backward ; and the hand may be a little child's.

(f) There were gentlemen and there were seamen in the navy of Charles the Second. But the seamen were not gentlemen, and the gentlemen were not seamen.

(g) London was to the Londoner, what Athens was to the Athenian of the age of Pericles, what Florence was to the Florentine of the fifteenth century.

(h) The war between wit and Puritanism soon became a war between wit and morality. The hostility excited by a grotesque caricature of virtue did not spare virtue herself.

(i) *Either*, Then was fulfilled that which was spoken by Jeremy the prophet, saying, In Rama was there a voice heard, lamentation, and weeping, and great mourning, Rachel weeping for her children, and would not be comforted, because they are not.

*Or*, Then was fulfilled that which was spoken by Jeremiah the prophet, saying :—*A voice in Rama was heard, lamentation and great mourning ; Rachel bewailing her children, and would not be comforted, because they are not.*

N.B.—Candidates, who were unsuccessful last year, may answer the following questions from Collins's *Odyssey*, in place of those set from Macaulay's *History of England*, Chapter III :—

#### Alternatives to Questions 3.

*Either*,

Write a note on the types of female character depicted in the *Odyssey*. Who among the women, introduced here, appeals most to your fancy? Give reasons for your preference.

*Or*,

Describe the visit of Ulysses to the Shades. What conception of the life after death is set forth in this episode?

*Or*,

Describe the adventures of Ulysses with Circe and with the Sirens. What use of these stories has been made by two great English poets?

#### Alternatives to Questions 5 (f), (g), (h).

(f) The nautical names of his courtiers are as palpably conventional as our own Tom Bowline and Captain Crosstree.

(g) We need not call him, as Thersites does in Shakespeare, 'that dog-fox Ulysses', nor even go so far as to look upon him as what a modern translator terms him, 'the Scapin of epic poetry.'

(h) Worse mortals have been canonised in both ancient and modern calendars. And whether she was honoured thus in Ithaca or not, she certainly was at Sparta, where we are told that she displayed her new powers as a divinity once at least in a very appropriate manner—transforming a child of remarkable ugliness, at the prayer of its nurse, into a no less remarkable beauty.

## THIRD PAPER

Head Examiner—MR. RAJANIKANTA GUHA, M.A.

Examiners—	{	MR. DIGINDRANATH MAJUMDAR, M.A.
		„ HRISHIKES BOSE, M.A.
		„ JNANADAKANTA GANGULI, M.A.
		„ PRIYARANJAN SEN, M.A.
		„ ANANDAKRISHNA SINHA, M.A.
		„ JATINDRANATH CHAKRABARTI, M.A.
		„ DWIJENDRANATH BHATTACHARYYA, M.A.
		„ BANKUBIHARI BHATTACHARYYA, M.A.
		„ SASIMOHAN CHAKRABARTI, M.A.
		„ SURENDRANATH RAY, M.A.
		„ ABU HENA, M.A.
		„ GIRIJAKANTA MAJUMDAR, M.A.
		„ GOPALCHANDRA BHATTACHARYYA, M.A.
		„ ARTHUR MOWAT, M.A. (EDIN.).
		„ IBRAHIM KHAN, M.A.
		„ HARENDRACHANDRA CHAKRABARTI, M.A.
		DR. SUSILCHANDRA MITRA, M.A., D.LITT.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

- Write a short essay on *one* of the following subjects — 30
  - Some birds of an Indian village.
  - Rivers.
  - A stitch in time saves nine.
  - The function of a University.
- Narrate in not more than 300 words any legend with which you are acquainted. 20
- Put into your own words the sense of *two* of the following extracts (one prose, one verse) :— 30

(a) My original intention had been merely to go in search of the birds-of-passage in their winter quarters, to devote these all too short weeks to getting a few strips of film of them, and obtaining an insight into their ways of living. There was hardly even time for that. But I was unable to resist the temptation of diverting my camera from the cranes, and sacrificing a day, and a handful of plates, on the new African birds that kept constantly coming into sight. There were many other animals also, apart from the birds. Monkeys were swinging in the high trees, antelopes running along a little way back from the bank of a river as the *dahabiye* passed by, and turning inquisitively to take another look at us. Hippopotamuses rose snorting all around us, exposing their monstrous heads; and living images of primeval leviathans lay dozing on the islets of slime. But the chief attraction to me was the birds. For they were nothing like so shy or difficult to get near with a camera as an eagle or a wildgoose at home.

*dahabiye* = a boat on the Nile.

(b) The difficulty of determining whether a man is or is not good has now become a commonplace of moralists and satirists. It is almost impossible to discover any test which is satisfactory in the extreme. The good man of society is simply the man who keeps to the prescribed routine of what is commonly considered to be duty; the bad man he who deserts it. In order to arrive at this view men start from a proposition which is true, but they make the mistake of assuming the converse proposition to be true. It is true that the good man does good deeds, but it is not necessarily true that he who does good deeds is a good man. Selfish prudence dictates a virtuous course of action almost as imperatively as virtue itself; on the other hand, bad deeds may be caused by bad teaching, bad example or the pressure of necessity, not less than by a vicious disposition.

(c)

*Stupidity Street.*

I saw with open eyes  
Singing birds sweet  
Sold in the shops  
For the people to eat,  
Sold in the shops of  
Stupidity Street.

I saw in vision  
The worm in the wheat,  
And in the shops nothing  
For people to eat;  
Nothing for sale in  
Stupidity Street.

(d)

The glories of our blood and state  
Are shadows, not substantial things;  
There is no armour against Fate;  
Death lays his icy hand on kings:  
Sceptre and Crown  
Must tumble down,  
And in the dust be equal made  
With the poor crooked scythe and spade.  
Some men with swords may reap the field,  
And plant fresh laurels where they kill;  
But their strong nerves at last must yield;  
They tame but one another still:  
Early or late  
They stoop to fate,  
And must give up their murmuring breath,  
When they, pale captives, creep to death.

4. Either, Comment on Macaulay's prose style, with special reference to his use of rhetorical figures. 10

Or, How does oratory differ from narrative? 10

5. Scan two of the following extracts, and name the metre:— 10

(a) He rode to the wicket and reined his horse in  
Where steeped the hollyhocks over the wall,  
And gazed on a woman who, neat as a pin,  
With two sunny children found joy in their ball.

(b) I heard no more of bird or bell,  
The mastiff in a slumber fell,  
I stared into the sky,  
As wondering men have always done  
Since beauty and the stars were one,  
Though none so hard as I.

- (c) Thus the Mayne glideth  
Where my Love abideth;  
Sleep's no softer : it proceeds  
On through lawns, on through meads,  
On and on, whate'er befall.

## BENGALI VERNACULAR

*Paper-Setters*— ( MR. SYAMAPRASAD MOOKERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.  
( RAI BAHADUR KHAGENDRANATH MITRA, M.A.

*Head Examiner*—RAI BAHADUR KHAGENDRANATH MITRA, M.A.

<i>Examiners</i> —	{	SRIMATI LABANYALEKHA BANERJEE, B.A.
		„ SWARNAPRABHA SEN, B.A., B.T.
		„ SUKHALATA DUARA, M.A., B.T.
		„ SUNITIBALA CHANDA, M.A.
		MR. KUMUDCHANDRA RAYCHAUDHURI, M.A.
		„ BIBHUTIBHUSHAN KANTHAL, M.A.
		„ MANINDRAMOHAN BASU, M.A.
		„ RAMRENU ACHARYYA, M.A., B.T.
		„ SAURINDRAMOHAN MUKHERJEE, B.L.
		„ TAMONASCHANDRA DASGUPTA, M.A.
		„ ABDUL MAJID, M.A.
		„ CHARUCHANDRA BASU.
		„ HEMCHANDRA VIDYARATNA.
		„ RAJENDRANATH KANJILAL, M.A., B.L.
		„ PRABODHCHANDRA SEN, M.A.
		„ BISHNUCHARAN BHATTACHARYYA, M.A.
		„ JANARDANPRASAD CHAKRABARTI, M.A.
„ JATINDRAMOHAN BAGCHI, B.A.		
„ SARATKUMAR SENGUPTA, M.A.		
„ SIBRATAN MITRA.		
„ NARENDRANATH BHATTACHARYYA, B.A.		
„ GIRIJASANKAR RAYCHAUDHURI, M.A.		

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Describe the features of Iswar Chandra Vidyasagar's character which constitute its excellence according to Ramendra Sundar Trivedi. 10

*Or*, Describe the steps by which, in the opinion of the late Sir Asutosh Mookherjee, the Bengali literature can be improved. 10

2 Explain fully with reference to the context any two of the following passages :—

(a) প্রীতি সংসারে সর্বব্যাপিনী—প্রীতিই ঈশ্বর ! প্রীতিই আমার কর্ণে একপকার সংসার-সঙ্গীত । অনন্তকাল সেই মহাসঙ্গীত সহিত মনুষ্য-হৃদয়তন্ত্রী বাজিতে থাকুক । মনুষ্য জাতির উপর যদি আমার প্রীতি থাকে, তবে আমি অগ্র স্তব্ধ চাই না ।

(b) প্রকৃতি আপন নীরব ভাষায় যে শিক্ষা প্রদান করেন, পৃথিবীর কোন কাব্য বা কোন উপদেষ্টার উপদেশ হইতে সে শিক্ষা লাভ করিতে পারা যায় না । প্রকৃতির নিত্য নবীন মুখশ্রী যে কত অপ্রেমিককে প্রেমিক ও কত অকবিকে কবি করিতেছে, তাহার সংখ্যা নাই ।

(c) আমি ত মনে করি, রাজসভায় দৃশ্যস্ত শকুন্তলাকে যে চিনিতে পারেন নাই তাহার প্রধান কারণ, সঙ্গে অননুয়া প্রিয়ংবদা ছিল না । একে তপোবনের বাহিরে, তাহাতে খণ্ডিতা শকুন্তলা, চেনা কঠিন হইতে পারে ।

(d) যাহার আগমন-প্রতীক্ষায় আকুল দুইটি আঁখি দিনান্তে দ্বার-প্রান্ত হইতে পথের দিকে সতৃষ্ণ দৃষ্টি নিক্ষেপ করে না, প্রজ্বলিত সান্ধ্য দীপালোকে রজনীর বিশ্রামার্থ শয্যারচনা যাহার জন্ত হয় না, ব্যাধি-পীড়ার দিনে দুইখনি প্রাস্তিহীন সেবা-হস্তের সম্মেহ গুণ্ধবা দিতে এ সংসারে যাহার কেহ নাই, তাহাব জীবনের সহিত তুলনায় আরবের বালুবেলা এবং সাহারার মরুক্ষেত্রেও সরস বলিতে হইবে !

3. Explain fully any three of the following passages :—

15

(a) বিমল হেম জিনি তনু অমুপাম রে

তাহে শোভে নানা ফুলদাম ।

কদম্ব-কেশর জিনি একটা পুলক রে

তার মাঝে বিন্দু বিন্দু ঘাম ॥

(b) কহিল গভীর রাত্রে সংসারে বিরাগী —

“গৃহ তেয়গিব আজি ইষ্টদেব লাগি” ।

কে আমারে ভুলাইয়া রেখেছে এখানে ।”

দেবতা কহিলা—“আমি !”—গুনিল না কানে !

(c) যে বিধি নয় ধর্ম্মা, বৃদ্ধি, তার আজি রোখ-শোধ ;

বিধির টনক নড়ায় শিশুর শিষ্ট প্রতিরোধ ।

বিধি-বহিঃস্তরের বিধি মান্বে না কেউ আর,

ওই শোনা যায়, জন্তলিকা ! নৃসিংহ-ছকার !

(d) তোমার সৌন্দর্য্যদূত যুগ যুগ ধরি’

এড়াইয়া কালের প্রহরী

চলিয়াছে বাক্যহারা এই বার্তা নিয়া

“ভুলি নাই, ভুলি নাই, ভুলি নাই প্রিয়া ।”

- (e) “আনায়-মাঝারে বাঘে পাইলে কি কভু  
ছাড়ে রে কিরাত তারে ? বধিব এখনি,  
অবোধ তেমতি তোরে ! জন্ম রক্ষঃকুলে  
তোর, কত্রধর্ম, পাপি, কি হেতু পালিব  
তোর সঙ্গ ? যারি অরি, পারি যে কৌশলে ।”

4. Quote from memory the first six lines either of *যমুনা-লহরী* by Govinda-chandra Roy or of *বঙ্গভাষা* by D. L. Roy or of *অহল্যার প্রতি* by Rabindranath Tagore.

5. (a) Construct a simple sentence using all the following words :— 5

অন্ধকার, হুরারোহ, বনীভূত, সুদূরপর্যাহত, মহীধর ।

- (b) Derive the following words :—

অকবি, শুশ্রূষা, বিরাগী, ধর্ম্য, শুভকর ।

6. Amplify the idea contained in the following lines :— 15

দাও ফিরে সে অরণ্য, লও এ নগর,  
লহ যত লৌহ লোষ্ট্র কাষ্ঠ ও প্রস্তর,  
হে নব সভ্যতা, হে নির্ভর সর্বগ্রাসী,  
দাও সেই তপোবন গুণাচ্ছায়া-রাশি,  
মানিহীন দিনগুলি,—সেই সঙ্কট-স্থান,  
সেই গোচারণ, সেই শাস্ত সামগান,  
নৌবার-ধাত্তের মুষ্টি, বঙ্কল বসন,  
যথ হ'য়ে আত্মমাঝে নিত্য আলোচন  
মহাতত্ত্বগুলি । পাষণ পিঞ্জরে তব  
নাহি চাহি নিরাপদে রাজভোগ নব ;—  
চাই স্বাধীনতা, চাই পক্ষের বিস্তার,  
বক্ষে ফিরে পেতে চাই শক্তি আপনার,—  
পরানে স্পর্শিতে চাই—ছিঁড়িয়া বন্ধন—  
অনন্ত এ জগতের হৃদয়-স্পন্দন ।

7. Translate into Bengali :—

15

‘Suppose that one of your servants should renounce the world, shave his hair and beard, put on the yellow robes, and live in solitude, content with the bare necessities of life—how would you treat that man ? Would you force him to return to his duties ?’ ‘Nay,’ answered the king, ‘we should treat him with reverence, rise from our seat in his presence and bid him be seated, prepare him a dwelling place, provide him with food, robes, and medicines, and all that he might require.’ ‘Then,’ said the Buddha, ‘have you not shown that there is, in this world, a reward for him who leads the higher life ?’ The king agreed.

8. Write an essay on any one of the following subjects :—

20

- (a) Village sanitation.  
(b) The form of recreation you like best and the reasons therefor.  
(c) The career which you wish to follow and your aptitude for it.



## ASSAMESE VERNACULAR

*Paper Setters*—{SRIJUT JNANANATH BORAH, B.L.  
MR. SURYYAKUMAR BHUIYAN, M.A.

*Examiner*—MR. AMBIKANATH BORAH, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Give an account of one of the following :— 10

- (a) The coronation of an Ahom king.  
(b) Administration of Justice under the Ahoms.  
(c) Assamese Buranjis.

2. *Either*, সামাজিক ভাবৰ প্ৰভাৱ যেনেকৈ ব্যক্তিগত ভাবৰ ওপৰত আছে তেনেকৈ ব্যক্তিগত ভাবৰো সামাজিক ভাবৰ ওপৰত আছে। 10

Discuss the above statement and show how the two sentiments react on each other.

Or, State briefly the part played by commerce in revolutionizing the ideas of mankind.

3. *Either*, Briefly reproduce the plot of *Kumār-haran*. 8

Or, Account for the popularity of *Kumār-haran*.

4. Explain three of the following passages with reference to the 3×4 context :— =12

(a) হৃদয়ে হৃদয়ে প্ৰণয় নহলে যেনেকৈ সমাজ আৰু জাতি হ'ব নোৱাৰে, তেনেকৈ সাৰ্বজনীন ভাবেও প্ৰকৃত প্ৰণয়ৰ ওপৰত নিৰ্ভৰ কৰিছে।

(b) কালক্ৰমে সিসকলৰ বাহুবলী কৃত্ৰিয়ৰ স্বভাৱ গুচি মুখবলী ব্ৰাহ্মণৰ স্বভাৱ হল।

(c) “হাতো নেমেলিবি ফুলো নিছিঙিবি,  
কবে নাৱৰীয়া তই ?  
যাহুহে ফুলৰ কি জানে আদৰ ?  
তেজীমলাহে মই।”

(d) সপোনত পাৱে অষ্টনিধিৰ ভণ্ডাৰ।  
চেতন লভিলে সবে হৰে ছাৰখাৰ ॥  
সপোনত বডবস ভুঞ্জ পেট ভৰি।  
তেৰে কি পলাৱে ক্ষুধা জানিবা সুল্লিৰি।

(e) আমাৰ ইদিন নেথাকে সদায়  
কান্দিব লাগিব মিতা।  
মউৰ সোৱাদ হাঁহি ধেমালিও  
হবহে এদিন তিতা।

5. (a) Give the feminine forms of *three* of the following words :—

3

উজলাদিতা, বন্ধু, গৰাগী, বাট্টা, বান্ধনি, ডাঙৰীয়া ।

(b) Form adjectives from *two* of the following :—

2

গাঁও, বাহ, বন, আপদ, পানী ।

6. Explain the meaning of *one* of the following sayings :—

5

(a) গঁড়গাওঁ, কথা শুনি তল যাওঁ ।

(b) গঁড়গাওঁ কটাৰি ডাবেই কাটে ।

(c) নগৈ গঁড়গাওঁৰ বতৰা কয় ।

(d) ইয়াত মাৰিলে টিপা, গঁড়গাওঁ পালেগৈ শিপা ।

(e) গঁড়গাওঁৰ পিছল বাট,  
বঢ়াকো নিচিনি, ডেকাকো নিচিনি,  
হাতেপতি লাখুটিপাত ।

(f) গঁড়গাওঁ মিতৰে মুখে কলে “ধাক্, ধাক্”, ভৰিৰে হেচোকে  
নাও ।

(g) যাৰ বাপেক নাই মেলত তাৰ পুতেক হয় ফপৰা ।

(h) বজাই ভাল দেখে যাক ভেঁটিও নালাগে তাক ।

(i) মই কওঁ বাজভগনৰ কথা, সি কয়,—“কল-থোকা বাহুলিয়ে  
খালে” ।

7. Either, Amplify the idea contained in the following sentence :—

15

দুঃখৰ একাল সন্তৰ সৰ্ব্বতিকাল ।

Or, Give the substance, in Assamese, of the following passage :—

সংসাৰ বহুকণী । তাত যেনে বিষাদৰ বিননি আছে, তেনে  
আনন্দৰ কিৰিলিও আছে ; বিপদৰ কাঁইটনি আছে, সম্পদৰ ফুলনি আছে ।  
ই উত্তম আৰু অধমৰ মিলনভূমি, আনন্দ আৰু বিষাদৰ ওভতনি । ইয়াৰ  
একদিশত হাঁহীকাৰৰ বোল, একদিশত উৎসৱৰ জয়চোল শুনা যায় ।  
দোষ কেবল সংসাৰযাত্ৰীৰ । কোনো যাত্ৰীৰ জয়চোল মিলে, কোনো  
যাত্ৰীৰ হাঁহীকাৰ মিলে । যাত্ৰীৰ বিজ্ঞা-বুদ্ধি বা প্ৰবৃত্তি অনুসৰি সংসাৰ  
অমৃতময় বা গবলময় হয় । সংসাৰযাত্ৰী এটাইবিলাক শিশুৰ নিচিনা  
নিৰ্কোষ নহয় । সকলোৱে সংসাৰৰ মোহিনী মূৰ্ত্তি দেখি তাৰ সন্ধি সন্ধটৰ  
প্ৰতি অন্ধ নহয় । এভাগে যদি উত্তমুৱা স্বভাৱৰ গুণত নিঃস্বপ্নে সংসাৰ  
প্ৰবেশ কৰি যাতনা-জীয়াতু লাভ কৰে, এভাগে আকৌ সংসাৰৰ পাৰত  
বহি তাৰ আওতাওৰ ভূ-ভা লৈ সাৱধানে সসম্বলে সংসাৰ প্ৰবেশ কৰে,  
আৰু জীয়াতুৰ সলনি অময়া সুখ-সম্পদ ভোগ কৰে । এই প্ৰেৰণা  
অলেখ যাত্ৰীয়ে জাকেজাকে সততে সংসাৰত খেদা দিব লাগিছে, আৰু  
সুকলমে সংসাৰ তৰি ইপৰীয়াত জগৎভেদী হুৰে বিজিয়াই কৰ লাগিছে  
যে সংসাৰ সুখৰ আলয়, সাৱধানে চলিলে যাতনাৰ কোনো শঙ্কা নাই ।

8. Translate into Assamese *one* of the following passages :—

15

(a) A unique feature in Assamese society is the absence of any specific caste reserved only for weaving. Every Assamese woman, be she the daughter of a Brahman or a Sudra, a Buddhist or an animist a Muhammadan or a Christian, a prince or a beggar, is a weaver by birth. A knowledge of weaving is an essential qualification for her, while proficiency in the art ensures for her a ready disposal in the matrimonial market. An Assamese maiden of the marriageable age, remaining long under her mother's roof, is not a financial burden to her parents. The men go to the field to earn the bread of the family, while their women remaining at home provide the other necessary article of existence—their raiment. Nothing is more disgraceful to an Assamese woman than her appearance in society being clad in garments not woven by herself.

(b) I once met the son of a Hyderabad nobleman who had just finished his education in the Nizam's College. I asked him who was the first Bahmanee Sultan of Gulbarga, and he said that he did not know if there had been any. He was equally ignorant of the fate of the last King of Golconda, although the remains of the old royal fortress are within an hour's drive from the city where he lived! In our Indian schools and colleges we teach the broad outlines of Indian history, but we pay very little attention to the details of the history of the different provinces. It is as essential for a Deccan boy to know something of the early history of that part of the country in which he lives as it is for him to know about Akbar, Aurangzeb, Clive or Warren Hastings.

9. Write an essay in Assamese on *one* of the following subjects :—

20

- (a) Present-day Assamese literature.
- (b) Trade and Commerce among the Assamese.
- (c) A separate university for Assam
- (d) The Round Table Conference.
- (e) 'The end of man is an action, and not a thought, though it were the noblest' (Carlyle)
- (f) 'A most wonderful thing that we notice in India is that here the forest and not the town is the fountainhead of all its civilization' (Rabindranath Tagore).
- (g) College friendships.

## HINDI VERNACULAR

*Paper-Setters*—{ LALA SITARAM, B.A.  
PANDIT SAKALNARAYAN SARMA.

*Examiners*—{ PANDIT SAKALNARAYAN SARMA.  
MR. RAMDAS GAUR, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write out in Hindi the scheme of the compilation of Tulsī Das's *Rām Charitā Mānasa* according to Sukhdeva Lāl. 3

2. Explain fully in Hindi any *two* of the following three passages :— 12

(a) उसकी चोटी की सटकाई लख नागिन अपनी कँचलो छोड़ सटक गई। भौंह की बँकाई निरख धनुष धकधकाने लगा।

आँखों की बड़ाई चंचलाई देख मृग मीन खंजन खिसाय रहे । नाक की निकाई निहार तिल फूल मुरझाय गया ।

(b) फेरत धनु टंकारि दरप शिव सम दरसावत ।

साहस को मनु रूप काल सम दुसह लखावत ॥

जय लक्ष्मी सम वीर धनुष धरि रोष बढ़ावत ।

को यह जो कुरुपतिहि गिनत नहि इतहीं आवत ॥

(c) ज्यों कुमुद वन ससि तेज पावत लहत चुम्बक लोह ज्यों ।

भव सिंधु में नर डूब पावत ज्ञान छूटत मोह ज्यों ।

ज्यों लगत शैल बयार तन महुँ उठत जगि जोधा दोऊ ।

संसार वस्तु अपूर्व गुण केहि भांति जानि सकें कोऊ ॥

3. Explain the main points of difference between the language of Lallu Ji's *Ushā Swapna* and Pratāp Nārāyan Misra's *Sādhāran Vyavahār* 9

4. Summarize in simple Hindi any two of the following three passages :— 12

(a) हय हिनहिनात अनेक गज सर खाइ घोर चिकारहीं ।

बहु बजहिं बोज मारु धरु धुनि दपटि बीर उचारहीं ॥

टंकार धनु की होति घंटा बजहिं सर संचारहीं ।

सुनि सबद रन को बरन पति सुर बधू तन सिंगारहीं ॥

(b) श्री मती राधा का प्रेम कैसा उत्तम और सुन्दर है, कम में वह कौन सी मधुरिमा है जिसकी माधुरी को श्रीराधा इस प्रेम से पान करती है, हम में जो सुखानंद राधा को मिलता है, उसकी सीमा और उसका स्वाभाविक लक्षण क्या है ।

(c) तन पुलक निर्भर प्रेम पूरन नयन मुख पंकज दिये

मन-ज्ञान-गुन-गोतीत प्रभु मैं दोख जप तप का किये ॥

जप जोग धर्म समूह ते नर भगति अनुपम पावहीं ।

रघुबीर चरित पुनीत निसि दिनु दास तुलसी गावहीं ॥

5. Amplify the following passage :—

15

जब किसी देश के मर्म ज्ञानी साहित्य सेवी ने देश सुधार का काम अपने माथे उठाया तब उपदेश का काम इन्हीं दो उपन्यास और नाटकों से लिया है ।

6. Translate into Hindi :—

15

Kausambi was one of the most important cities of ancient India. It is mentioned in the *Satapatha Brahmana*, the *Ramayana*, and the *Meghaduta* of Kalidasa. According to the *Kathasaritsagara* it was the birthplace of the celebrated grammarian Katyayana or Vararuci, as Salatura was of Panini, and the scene of the Sanskrit play, the *Ratna-*

*cali*, where it is appropriately designated Vatsapattana. 'I knew not' says Vatsa-*raja*, 'that Kausambi was so wealthy! She outvies the residence of the God of Wealth.'

7. What is the normal order of the parts of a simple sentence in Hindi? Give examples of deviations from this rule and the effect of this deviation. 10

8. Write an essay in Hindi on one of the following subjects :— 20

(a) सन्तोष निरोगता का लक्षण है। छोम बीमारी का लक्षण है।

(b) Muhammadan influence on Hindi language and literature.

(c) राजा पिता है, प्रजा सन्तान है। सन्तान का काम है कि पिता की भक्ति करे।

### MAITHILI VERNACULAR

*Paper-Setter*—KUMAR GANGANAND SING, M.A.

*Eraminer*—PANDIT DEBANANDA JHA.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. What is the *Jamalārjuna* episode of Krishna's boyhood as described by *Manabodha*? Describe in simple Maithili. 10

2. Explain, with reference to the context, one of the following passages :— 20

(a) नील नलिन सन नयन सुभग छल अरुण कमल कियै भेले ।  
मधुक कुसुम छवि छल गंडस्थल तोरें यलिन कि कैले ॥  
तिल फुल सन अति सुभग नामिका किअय तपय थनइवाशे ।  
पकव विम्बफल सदश ओठ दुहु किअय न करय प्रकाशे ॥  
कुन्द कुसुम सन दशन मनोहर करय न बिहसि विकाशे ।  
वचन रचन अमृतोपम सुनिय न सुतिपुट रहय निराशे ॥  
राका शशि दुति हारिणि मुख छवि छाल मलिन भेल आजे ।  
कहु सुन्दरि निज शोकक कारण चित चिन्ता करु त्याजे ॥

(b) गगन गरजि घन घोर ।  
हे सखि, कखन आओत पहु मोर ॥  
उगलन्हि पाचोवान ।  
हे सखि, अबन बचत मोर प्रान ॥  
करब कोन परकार ।  
हे सखि, यौवन भेल जीयमार ॥  
भनइ विद्यापति भान ।  
हे सखि, पुरुष करहि परमान ॥

3. Re-write, in simple Maithili, the following letter :—

10

स्वस्ति सकल-तीर्थ-भूत-चरण सती शिरोमणि काँ प्रणामपुरःसर  
विज्ञसि जे सतत उद्विग्न रहै छलहु परन्तु डेढ़ वर्ष पर राति स्वस्ति  
भेल जाहि सँ निश्चय भऽ आशा करैत छी जे शीघ्र कुशल भेप्त,  
एतेक दिन पुरश्चरण भङ्गभिया अपन स्थिति-विषय नहि लिखैत छलहु,  
हम हरदत्त पण्डाक मकान श्री वैश्यनाथ में छी इति माघ कृष्ण  
तृतीयां चन्द्रे ।

भवदीय-कुशलाकांक्षी

सुन्दरशर्मा

4. Amplify the idea contained in the following :—

15

तिमिर मयी रजनी में छी हम भ्रान्तपथिक हे नाथ ।

एकसरि छी हम ठाढ़ि दयामय कानन मध्य अनाथ ॥

5. Translate into Maithili :—

15

In short, speaking of the majority of mothers, they leave their children entirely to the care of servants ; or, because they are their children, treat them as if they were little demi-gods, though I have always observed that the women who thus idolize their children seldom show common humanity to servants, or feel the least tenderness for any children but their own.

6. Construct sentences to show in how many different senses बड़ बढ़ियाँ may be used.

5

7. Illustrate :—

5

(a) चरक सम्बन्धे कड़हड़ मौसा ।

(b) जैह टिटही सैह निलकंठ ।

(c) झरकल मुंह झँपनहि नीक ।

(d) तीन में कि तेरह मे ।

(e) तेलीक बड़द छे कुम्हैन मती ।

8. Write an essay on one of the following subjects :—

20

(a) Calcutta :—(i) Its position in pre-British days ; (ii) How it came into the hands of the British ; (iii) Its improvements under the British rule ; (iv) The transfer of the British Indian capital from Calcutta to New Delhi ; (v) A description of modern Calcutta ; (vi) Reflections about the future.

(b) Truth :—(i) A universal religion ; (ii) Its power and influence ; (iii) Its bearing on human and national life ; (iv) Difficulties in practising it ; (v) Conclusion.

## NEPALI VERNACULAR

*Paper-Settlers*—{RAI SAHIB HARIPRASAD PRADHAN, M.A.  
MR. BODHIKRAM ADHIKARI, M.A.

*Examiner*—MR. SURYA VIKRAM GEWALI, B.A., B.T.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Nepali any two of the following passages :—

40

(a) I will tell you a story which I heard once in India. A man came to a sage and asked him to tell him of truth. He said to the sage, 'To-day I am at leisure. I have nothing much to do, so please tell me concerning truth.' And the wise man said, 'First of all, by starvation, by control of the body, make your mind pure ; then become as white as snow ; and, finally, sternly repress all knowledge. Then I will tell you concerning truth.'

(b) When my brother was ill, I used to keep awake at night, looking at the stars making their way across the horizon and wondering if they could save his life. I watched the shade of every tree in the daytime, questioning it, whether it could protect him. But it did not protect. And I saw that life is one, though it has many expressions, that as long as I separated myself from my brother, from that life which was in him, I longed for fleeting comfort, fleeting shadows of understanding, I prayed and questioned every passer-by. But the moment I realized that, wherever there is life, it is one, though there may be a multitude of expressions of that life, I ceased to grieve. Sorrow gives the perfume of understanding.

(c) If in that mass the separate units, the individuals, are not happy, the mass will be unhappy. As long as the individual has not established order within himself, has not found the serenity, the tranquillity which results from the vision of the eternal goal, he will create disorder, misery, misunderstanding, and confusion, as you are all creating at the present time. Momentary order is not important ; on the contrary, what you must establish is the order which will endure, because you have founded it upon that which is eternal.

2. Write an essay in Nepali on any one of the following subjects :—

30

- (a) Advantages and disadvantages of the present system of education.
- (b) Self-help as a key to success in life.
- (c) Prevention is better than cure
- (d) Example is better than precept.

3. Explain and expand in Nepali the ideas contained in one of the following passages :—

15

(a) जगत सब बर्बेचा पुष्प मानीस सारा ।

नरहरि ! तिमि माली प्राण प्यारा सहारा ॥

यदि घुन पुतली को मालिले फुँ न राख्छा ।

तब त मधुर शोभा कुञ्ज को जाइ जाला ॥

(b) अधि षट कुविजा को नाथ ! संगत रुचायौ ।

चटपट गजको त्यो प्राणबाधा छुटायौ ॥

हडबड गरि हुर्मत् द्रौपदीको बचायौ ।

किन कुनि अब हाम्रा पालिमा ता ढिलायौ ॥

1. *Either, Explain briefly in Nepali the causes leading to the victory of the Pandavas over the Kauravas in spite of the overwhelming strength of the latter.* 15

Or, Explain and expand in Nepali, with reference to the context, the ideas contained in the following passage :—

फैलिन्छ भाइ फुटदा गृहछिद्र सारा,

वर्पन्छ वैरिहरु को करवाल धारा ;

विध्वस्त हुन्छ कुलसंपति राज्यमान,

आखीरमा विवश भैकन जान्छ ज्यान ।

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## ORIYA VERNACULAR

*Paper-Setters*—{ MR. KASINATH DAS, M.A.  
REV. BRAJANANDA DAS, B.A.

*Examiner*—MR. MAHESWAR DAS, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Explain with reference to the context any two of the following extracts :— 20

(a) ଗୋ ଭରଦର୍ପଣେ ସଦନେ ବିସ୍ମିତ  
ହୋଇ ଗମକିଲା ନୀମ୍ନରେ ଚିତ୍ତିତ,  
ଦେଖାଇ ଦେଲା ଗୋ ସଂହାରମୂରତି,  
ପ୍ରକୃତିର ସେହି କରାଳ ଆକାଶ  
ଯା ଦେଖି ଆଗକେ ଦୈତ୍ୟ-ଆଖଣ୍ଡ  
ବିଫଳ ମଣିଲା ନିଜ ରୁଦ୍ଧ-ବଳ ।

(b) କେତେ ଥର ଦେଖି ଅଛି ଏହିମାନ  
ମାତ୍ର ପ୍ରତି ଥର ଦିଗେ ଆନ ଆନ  
ଦୃଷ୍ଟପୂର୍ବ ହୋଇ ଅପୂର୍ବପ୍ରତିତି  
ସୁନ୍ଦରପଣର ଚିରନ୍ତନରୀତି;  
ସୁନ୍ଦରେ ଚୁପ୍ପିର ଅବସାଦ ନାହିଁ  
ଯେତେ ଦେଖିଲେ ହେଁ ନୁଆ ଦିଗୁ ଥାଇ ॥

(c) ପାମୋରିବ ଦେଖି, କହ, କେହୁ ନନ  
ଏ ଗୋଦ-ପାସୋରା ଅପୁରା ରୁବନ ?  
ରାଗତୀ-ରକତ କେଉଁ ରୂପପାୟୀ  
ଚୁପ୍ପ ହେବ ଏହା ଥରେ ମାତ୍ର ଧ୍ୟାୟୀ ?  
କଚନ-ବିଷୟ ନୁହଇ ଏଇକି,  
ହୁଏ ସେ କେବଳ ପାରେ ଅନୁରକି ।

2. Translate one of the following passages into Oriya :—

(a) Man is born to labour. 'Earn thy bread in the sweat of thy brow' was the curse inflicted by God upon the first man and woman. No one is exempt from this penalty except the miserable. Nothing that is worth having can be had without labour. The bountiful mother Earth refuses to increase her yield, unless she is dug and ploughed. She loves only her labouring sons.

(b) One of the greatest boons which the British rule has conferred upon us is the security to life and prosperity. Now there is law, there is justice, and there is everything that can promote the safety, comfort, and happiness of the people. The freedom of speech and writing and religious toleration were things unknown to India under the Moslem rule. A great impetus has been given to trade, commerce, and agriculture. In future it will bring our highest aspiration to realization.

3. Explain the following in your own words :—

ବିଧାବାହୁ ବିଚିତ୍ର କୌଶଳରେ ଚନ୍ଦ୍ରର ନିକଷ୍ପ ଚିହ୍ନିତ ଥିଲେ ହେଁ, ତାହା ଦ୍ଵାରା ପୃଥିବୀର କେତେ ଉପକାର ସାଧିତ ହେଉ ଅଛି । ଆମ୍ଭେ-ମାନେ ପ୍ରକୃତିର ପିଣ୍ଡୀଭୂତ ହାସ୍ୟରାଶିସ୍ଵରୂପ ପ୍ରିୟଦର୍ଶନ ଚନ୍ଦ୍ରର ଯାହା ଚିହ୍ନ ଦେଖି ମୁଗ୍ଧ ହେଉଁ, ସମସ୍ତ ତାହାର ରଙ୍ଗ—ସୂର୍ଯ୍ୟଙ୍କ ନିକଟରୁ ମାଗି ଆଣି ଅଛି । ସୂର୍ଯ୍ୟଲୋକ ତିରୋହିତ ହେଲେ ଚନ୍ଦ୍ର ଗୋଟିଏ କୃଷ୍ଣବର୍ଣ୍ଣ କୁଣ୍ଡା ଗ୍ରହମଣ୍ଡଳ ମାତ୍ର । ସୂର୍ଯ୍ୟର ଭିରଣ ଚନ୍ଦ୍ର ଉପରେ ପ୍ରତିଫଳିତ ହୋଇ ମଧୁର ସ୍ତ୍ରୀ ଲୋଭସ୍ତ୍ରୀ ସୃଷ୍ଟି କରି ଅଛି ॥

4. Rewrite the following in simpler language :—

ଆଦର୍ଶ ଉପଦେଶ ଅପେକ୍ଷା ମହତ୍ତ୍ଵରା ଏହା ପ୍ରିୟାନ୍ତର ଗିଣା ଏବଂ ଏହା ବିନା ବାଲ୍ୟବ୍ୟୟରେ ଗିଣା ଦିଏ । ଅନେକ ସମୟରେ ଏହା କିନ୍ତୁ ଅପେକ୍ଷା ଅଧିକ ଫଳପ୍ରସ୍ତୁତ ହୁଏ । ମାତ୍ର ଆଦର୍ଶ ସମ୍ମୁଖରେ ସବୁ ଉପଦେଶ ଲେଖନମାତ୍ର ଫଳପ୍ରସ୍ତୁତ ନୁହେଁ । ଆଦର୍ଶ ଅନୁଷ୍ଠାନ ହୁଏ କିନ୍ତୁ ଉପଦେଶ ନୁହେଁ । କଷ୍ଟତଃ ଅଭ୍ୟାସ-ବିରୋଧୀ ଉପଦେଶ ଏକାନ୍ତ ନିରର୍ଥକ । ସେହେତୁ ଏହା କେବଳ ନିତାନ୍ତ କାୟୁରୁଷୋଚିତ କପଟତାରର ଗିଣା ହୋଇ ଥାଏ ॥

5. Explain the following idioms and frame sentences to illustrate their uses :—

(a) ହାତେ ମାପି ତାଖଣ୍ଡେ ଚାରିବା ; (b) ଅରକ୍ଷିତରୁ ଦୈବ-ସାହା ; (c) କୋଟି ଉପରେ ନିହିତା ବିଜା ॥

6. (a) Form adjectives from the following words, and use those adjectives in suitable sentences :— 6

ବର୍ଷ, ଗଢ଼ି, ସଂସାର, ମେଧା, ସ୍ବାସ୍ଥ୍ୟ, and କୁଳ ।

(b) Fill up ellipses in the following :—

5

ଓଡ଼ିଶା ——— ବାହାରେ ଓଡ଼ିଆର ପ୍ରତିପତ୍ତି ——— ଆଦର ନାହିଁ ।

ଓଡ଼ିଆ ବି ——— ଓଡ଼ିଶାକୁ ——— କର୍ମକ୍ଷେତ୍ର ମନେ କରେ ? ପ୍ରତି

ଘୋଷିତା ——— ଉଦ୍‌ଘାଟନ ——— କରି ଓଡ଼ିଆ ——— ଦେଖାଇ ଅଛି କି ?

7. Write an essay on any one of the following subjects :—

20

(a) Forgiveness is the best revenge.

(b) Description of a festival in Orissa.

(c) Little knowledge is a dangerous thing.

## URDU—VERNACULAR

*Paper-Setter*—MAULVI A. F. M. ABDUL KADIR, M.A.

*Examiner*—MAULVI M. MAHFUZAL HAQUE, M.A.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks*

1. What does Sir Saiyid Ahmad Khan mean by the term 'civilisation'? Explain his view-point fully in Urdu. 8

2. What are the merits of Ghālīb's Urdu prose? Set forth in this connexion the views of Hālī. 7

3. Either, re-write the following lines in simple and idiomatic Urdu :— 9

کسی کتاب میں نظر سے گذرا کہ زمانہ حال کا کوئی  
فلسفی خردبین میں پانی کی ایک بوند دیکھ رہا تھا - سر  
سے زیادہ طرح کے جاندار تو وہ اس ایک بوند میں بمشکل  
شمار کر سکا - آخر تھک کر بیٹھ رہا - ایک بوند میں اتنی  
مخلوقات ہو تو تمام کرۂ اب میں جو تین چوتھائی زمین  
دھانکے ہوئے ۛ کتنی مخلوقات ہوگی خدا ہی کو خبر ۛ -  
پھر زمین کے گرد اگرد پینتالیس میل کے دل کا ہوا کرۂ

ہے اور اُسمیں بھی جانداروں کی ( ایسی ہی یا اس سے زیادہ ) کثرت ہے \*

Or, Give the gist of Hālī's essay on زبان گویا

4. Who was the author of *Gulzār-i-Nasīm* ? Give a short account of his life, and, in this connexion, give an estimation of the *mathnawī* as a poetical production. 8

5. Explain in simple and clear Urdu one only of the following extracts:— 8

(a) لائی حیات آئے - قضا لے چلی چلے

اپنی خوشی نہ آئے نہ اپنی حوشی چلے

ہم سا بھی اس بساط پہ کم ہوگا بد قمار

جو چال ہم چلے رہ نہایت بری چلے

بہتر تو ہے یہی کہ نہ دنیا سے دل لگے

پر کیا کریں جو کام نہ بے دل لگی چلے

ہو عمر خضر بھی تو ہو معلوم وقت مرگ

ہم کیا رہے یہاں ! ابھی آئے ابھی چلے

مقدور ہمیں کب ترے وصفوں کے رقم کا

(b) حقا کہ خداوند ہے تو لوح و قلم کا

جس مسند عزت پہ کہ تو جلوہ نما ہے

کیا تاب ؟ گذر ہوئے تعقل کے قدم کا

بستے ہیں ترے سایہ میں سب شیخ و برہمن

آباد ہے تجھ سے ہی تو گھر دیر و حرم کا

ہے خوف اگر جی میں تو تیرے غضب سے

اور دل میں بھروسا ہے تو ہے تیرے کرم کا

مانند حباب آنکھ تو اے درد کھلی تھی

کھینچا نہ پر اس بحر میں عرصہ کوئی دم کا

6. Use the following idioms in short sentences of your own :—

10.

ہوا ہونا - جل دینا - آنکھیں چرانا - قول ہارنا - گل

کھلنا

7. Give, in Urdu, the substance of the following extract :—

15

مولانا حالی کے کلام نظم کے متعلق ارباب نظر میں اختلاف ہے - جو لوگ محض پاکیزگی خیالات کو شاعری کا جوہر کہتے ہیں، بلا لحاظ اس امر کے کہ ان خیالات کو کس پیرایہ میں ادا کیا گیا ہے، وہ مولانا موصوف کو نئی شاعری کا پیغمبر سمجھتے ہیں اور امر واقعی یہی ہے کہ جس قدر نئے خیالات آپ نے نظم کئے ہیں کسی دوسرے شخص نے نظم نہ کئے ہونگے - لیکن جن نقادان سخن کی یہ رائے ہے کہ شاعری کا پہلا اصول یہ ہے کہ نثر سے زیادہ پرتائیر دلکش ہو اور محض خیالات کی پاکیزگی ارکان شاعری میں نہیں ہے بلکہ خیالات کے پرتائیر اور لطیف پیرایہ میں نظم ہونے کو شاعری کہتے ہیں وہ مولانا ممدوح کے کلام کی داد دینے میں تامل کرتے ہیں \*

8. Translate in simple and idiomatic Urdu :—

15

But the Mongol invasions, though not lengthy in themselves, left effects which were both profound and permanent. The Mongols were apt destroyers but poor builders; as a consequence the whole tone of the countries which they occupied was irretrievably lowered. The mere result of practically wiping out the population of huge cities like Baghdad was a destruction of all the best elements in a people already none too fit to carry forward the proud inheritance of its ancestors. Commerce, science, and the arts all felt the effects of this cumulative barbarian movement which destroyed in a few years the intricate life built up through the centuries far more effectively than the mere wrangles of local potentates, bad as these might be for the country, could have done in many decades.

9. Write a short essay on one of the following subjects :—

20

- (a) حرص کے پھیلنے میں ہاؤں بقدر وسعت  
تنگ ہی رہتے ہیں دنیا میں فراغت والے
- (b) وہ خلق سے پیش آتے ہیں جو فیض رساں ہیں  
ہے شاخ نمودار ہیں گل پہلے ثمر سے

(c) Muhsinu'l-Mulk : his early life; his history and educational activities; the part he played in developing Urdu prose; the reforms initiated by him and his place among the Muslim educationists of India.

## MARATHI VERNACULAR

*Paper-Settlers*—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
MAHAMAHOPADHYAY PANDIT SITARAM SASTRI.

*Examiner*—MAHAMAHOPADHYAY PANDIT SITARAM SASTRI

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Write an essay in Marathi on any one of the following :— 20

- (a) Advantages of having a hobby.
- (b) A haunted house.
- (c) Libraries.

2. Translate into Marathi the following :— 15

One need not be a cook to know when the porridge is burning. For every one who can write a good story there must be thousands who can appreciate good craftsmanship when they see it. There is no need to study a book on short-story writing in order to learn that the interest is cumulative; that the story must move consistently upward to a climax and then to an effective solution; that the characters must be convincing; that the events must be credible and indeed inevitable; and so forth. Our innate sense of 'rightness' is the only sure guide. We recognize a fine story as we recognize a beautiful statue. If the average reader does not respond to the best there is something seriously wrong which no amount of exposition will set right. The only reason why people favour third-rate plays and stories is that they have never encountered anything better.

3. Explain with illustrations what you understand by 'Vinoda' and show the difference between 'Koti' and 'Vinoda'. 10

4. Explain in Marathi the following :— 20

(॥) भोरप्यानं सोंग पालटिलें वरी ।  
बक ध्यान धरी मत्स्या जैसे ॥  
टिळे माळा मैद मुद्रा लावी अंगी ।  
देखो नेदी जर्गी फासे जैसे ॥  
दीवर या मत्स्या चारा घाली जैसा ।  
भीतरील फासा कळो नेदी ॥  
खाटीक हा स्नेह वादे पशु पाळी ।  
कापा वया नळी तया साठी ॥  
तुका झणे तैसा भळा भी लोकांत ।  
परि तूं कृपावंत पांडुरंगा ॥१॥  
बिरोधाचे मज न साहे वचन ।  
बहु होते मन कासावीस ।

ह्यणऊवी जीवा न साहे संगती ।

बैसतां एकांती सुख वाटे ।

देहाची भावना वासनेचा संग ।

नावडे उबग आला यांचा ।

तुका ह्यणे देव अंतरे यामुळें ।

आशामोहजाळें दुःख वाटे ॥२॥

(b)

धरी रे मना संगति सज्जनांची

जिणे वृत्ति हे पालटे दुर्जनांची ॥

वळे भाव हा वृत्ति सन्मार्गिं लागे ।

महाक्रूर तो काळविक्राळ भंगे ॥१॥

जिवा श्रेष्ठे ते स्पष्ट सांगोनि गेले ।

परी जीव अज्ञान तैसेच ठेले ॥

देहबुद्धिचा निश्चयो त्या ठळ न ।

जुने ठेवणें मीपणें ते टळें ना ॥२॥

जर्गी पाहतां साच तें काय आहे ।

अती आदरें सर्व शोधोनि पाहे ।

पुढें पाहतां पाहतां देव जोडे ।

भ्रम भ्रांति अज्ञान हे सर्व मोडे ॥३॥

5. Give shortly the substance of Ushahkal and sketch the character of 10  
शंकराच चापा,

6. Show how far the author accomplished the purpose meant by the 10  
name प्रेमकीर्तनी चौकिक in his work.

7. Give the sense of the following in Marathi :— 15

निरुपद्रवी व प्रामाणिकपणानें उदरनिर्वाह करणाऱ्या लोकां ना  
नाडण्याचा व लुबाडण्याचा च ज्यांचा उद्येड धंदा, त्यांच्यांत निष्काम प्रेम  
हा उत्तम सात्त्विक गुण कसा यावा ? व हा जो पर्यंत त्यांच्यांत येण्याचा  
बिलकुळ संभव नाही तो पर्यंत फसून जाऊन त्यांच्या त्या दुष्ट संबंधाळा  
सम्प्रेतीचा संबंध समजणें निवळ चूक होय. अशा या दुष्ट लोकांच्या  
संबंधाळा “संगनमत” ह्यणें च योग्य आहे. असल्या तन्हेच्या दुष्ट  
संबंधाना पुष्कळांनीं मैत्री या सदरांत गोविले आहे ते योग्य नाही.

## GUJARATI VERNACULAR

*Paper-Setter*—PROF. I. J. S. TARAPOREWALA, B.A., PH.D.

*Examiner*—PANDIT HARAGOBIND DAS SETH

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

20

1 નીચે લખેલા વિષયોમાંથી એક પર એક નિબંધ લખો :—

- (ક) ધનવાનનો ધર્મ.
- (ખ) શરીરની ખીળવણી.
- (ગ) આપણું પશુ ભાઈબંધ.

2. નીચે આપેલા ઉતારાપરથી તમારા પોતાના શબ્દોમાં કવિ દલપત 15  
રામનું જીવન લખો :—

કવીશ્વર દલપતરામ ડાહ્યાભાઈનો જન્મ કાઠીઆવાડના વઢવાણ શહેરમાં  
સને ૧૮૨૦ માં થયો હતો. એ શ્રીમાળી બ્રાહ્મણ હતા અને તે વખતે ત્યાં  
હાલના જેવી શાળાઓ ન હોવાથી એમણે માત્ર ગ્રાંમીની શાળામાં અભ્યાસ  
કર્યો હતો. ઉમરે પહોંચતાં સ્વામીનારાયણના પંથમાં ભળ્યા અને સાધુકવિ  
દેવાનન્દસ્વામી પાસે આ ભવિષ્યના કવિવરે કવિતાનો અભ્યાસ આરંભ્યો.  
હીરાને પાસા પડતાં ઝળખી ઊઠે તેમ દલપતરામની પ્રાકૃતિક કાવ્યશક્તિ  
ખીલી નીકળી. એટલામાં સાહિત્યવિલાસી ફાર્બસ સાહેબ સાથે પ્રસંગ મડ્યો  
અને રાસમાળાના સાધનાથે જૂના લેખ અને દંતકથાઓ ભેગાંકરવામાં કવિએ  
મદદ કીધી. આ સંબંધે કવિને કાઠીઆવાડના ખૂલ્લામાંથી બહાર કાઢ્યા.  
ફાર્બસ સાહેબે તેમને રાજનગરમાં લાવી નવી સ્થપાએલી “ગુજરાત  
વર્નાક્યુલર સોસાઈટી”માં ભેડાયા. એજ કાળે ગુજરાતી શાળાઓ માટે  
તૈયાર થતી વાંચનમાળામાં કવિતા લખવાનું એમને સૌંપવામાં આવ્યું અને  
આ પ્રમાણે ક. ઇ. ડા. નું નામ ગુજરાતી બોલતી પ્રબલને બાંધીતું થયું.

3. Translate the following passage into Gujarati :—

15

The record price for a Persian carpet was obtained at a sale in London on July 5, 1928, when 22,000 guineas were paid for 'the Emperor's carpet.' Made probably during the Golden Age of the sixteenth century it is said to have been a present from Peter the Great of Russia to Leopold I of Austria about 1698; it remained in the possession of the Imperial family of Austria until the establishment of the Austrian Republic after the Great War. The carpet is finely woven with a beautiful design terminating in large flowers and blossoms, with birds and animals in combat and mythical beasts. It is of silk and is dyed in twenty-one colours. Its size is 25 feet long by 10½ feet wide.



4. નીચલા વાક્યોનો સ્પષ્ટરૂપે અર્થ કરો :—

- (ક) આ સ્ત્રી પોતાના પતિને લોખંડના ચણા ચવાડે તેવી છે.
- (ખ) દૂધનો દાઝયો છારા કુંકીને પીએ.
- (ગ) આ તો ટાઢા પાણીએ ખસ ગઈ.
- (ધ) તેણે બગીરથ પ્રયત્નો આદર્યા છે.
- (ડ) ધરડી ઘોડી ને લાલ લગામ.

5. કેશવનું મૃત્યુ કેમ થયું તે સવિસ્તર લખો.

10

6. ખાગલાણના કીક્કાનું કાંઈક વર્ણન કરો.

10

અથવા

માધવ પ્રધાન અલાઉદ્દીનને કેમ મળ્યો અને તેને શું શું કહ્યું તે લખો.

7. “બરત” નામે કવિતા કોની છે? એનો કુંક સાર લખો.

8. નીચલી કડીઓ બરાબર સમજવો :—

12

- (ક) એક વાટ રણવાસની રે,  
ખીજ સિંહાસન વાટ;  
ત્રીજ વાટ શોણિતની સરિતે,  
હો ! શૂરના જ્ઞાનો ધાટ.
- (ખ) પોતાના પ્રિય દેશીજનના દુઃખ પરસ્પર ધરશે.  
જન્મભૂમિનાં ભોળાં ભાંડુ ભેળાં હળશે મળશે.  
ત્યારે પ્રભુતા સંચરશે, સ્વર્ગસમ સુંદર હિન્દ ધરશે
- (ગ) મહા નદીનો એક ધ્રુવવતો ચાલ્યો જાએ,  
કાળચક્રનો ત્યાં પડે ચીલો ન જરાએ;  
ગજનયુગ્મી ગિરિરાજ ધડયો કકુલ પથરાએ.  
કાળતણુ ત્યાં ચક્ર ધસાઈ ખાંડું થાએ

### KHASI VERNACULAR

Paper-Setter—MR. ROY ROWLAND THOMAS, M.A.

Examiner—RAI BAHADUR DOHORY ROPMAY, B.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Translate the following passage into Khasi :—

15

On he went boldly, passed many an ugly sight, far away into the heart of the Unshapen Land, beyond the streams of ocean, to the isles

where no ship cruises, where is neither night nor day, where nothing is in its right place and nothing has a name—till he heard the rustle of the Gorgon's wings and saw the glitter of his brazen talons. Then he knew that it was time to halt, lest the face of Medusa should freeze him into stone.

2. Compose sentences in Khasi illustrating the use of *five* of the following :—*Khlieng ka tyngap Kren madan, Kit iapar, Kiew 'langtylli, Ioh khawduh, Kylla tieng, Jiei.* 10

3. Write an essay in Khasi on one of the following subjects :— 30

(a) Comparison between College and School life.

(b) Self-help is the best help.

(c) The blessings of the British connexion with your country.

4. Write what you know about *either* Ka Thma Jaintapur *or* Ka Thma Nongkhlaw. 5

5. Explain fully with reference to the context :— 5

*Either,*

Kine baroh hynriew tylli ki kpait,  
Kiba lah eh ban pynjot ingkhong khait.

*Or,*

Baroh hynriew kim dep tang ha pyrthei.  
Sang bad pap ki long haduh khmat U Blei.

6. Give the context of — 10

*Either,*

Lah ka tieng kum bad kato 'ka riew mrad,  
Hei khun, pyrsa, kur, kha, shato wat mad.

*Or,*

Ka iing ka sem ruh ka jot khamakha,  
I kur i jaid ruh jynjar na kata.

7. Iathuh aiu u nongthoh jong phi u ong ha 'Ki Jingmlien ha Ka am' shaphang ban long uba janai ha ka kam. 15

## MODERN TIBETAN VERNACULAR

*Paper-Setter*—MR. SATKARI MUKHERJEE

*Examiner*—MR. KARMA SAMDON PAUL

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into Modern Tibetan :— 40

The fiat had gone forth from the durbar of Ferozsha Tughlak, sultan of Delhi, that any one worshipping an idol in the city should be put to death and his property confiscated, unless he should expiate his sin by embracing Islam. A Brahman was one day found guilty of idol-worship. He was hauled up before the kazi and, as he would not relinquish his own faith for the Arabian prophet's, he was condemned to be burned at the stake. The strong man died the death of a martyr. There was consternation among the Hindus.

Some clever men among them put their heads together and set up an image of the sultan himself in a public place on the sultan's accustomed way to the mosque. They decorated it with ornaments of flowers, burnt incense before it, and sang the praise of the sovereign whom it represented. They did this day after day. The sultan saw the worship, as did the kazi and his other great people. They were all very pleased at the loyalty of the Hindus, the sultan more than the rest. The man who was high priest of the worship was summoned to the audience chamber of the king, who, intending to bestow on him some marks of royal favour, deigned to ask what he would have. 'Your majesty', said the man, 'this, that you annul your edict against image-worship by us Hindus. Our worship of your image has given you pleasure; why should that of God's give you offence? Let us be loyal and loving to both in our own way'.

The order was revoked.

2. Give your own estimate of the character of Dri-med Kun-den, of the extent of his charity, and of his dealings with his wife and children. 15
3. Explain the following with reference to the context :— 15

(a) ཐུབ་པའི་ལྷང་བསྟན་ནགས་ཁྱོད་དཔེན་པུ་འདིར །  
 སི་མཐུན་གཡེང་བའི་ཅཱ་ཙོ་རབ་སྤངས་ཏེ །  
 རིག་འཛིན་དགའ་ལྡན་བདེ་བའི་གནས་འདིར །  
 དགེ་སྦྱོར་འཕེལ་བའི་སི་འགྲོ་ད་དུང་མྱོད །

(b) བདག་གིས་ཤོང་བའི་ཕྱག་བསྐལ་འདི་ལྟ །  
 འགྲོ་བ་སེམས་ཅན་ཀུན་ལ་སི་འབྱུང་ཤོག །  
 ཡབ་ཀྱི་ཞོར་བྱ་དུང་འཛོམས་ནས་བཟུང་མྱེ །  
 སིག་གི་དབང་པོ་བྱུན་པའི་བར་གྱིས་ནི །  
 སྦྱིན་པའི་མ་རོལ་བྱུན་བ་ཚྲོགས་པར་ཤོག །

- 4 Write an essay in modern Tibetan on any one of the following subjects :— 30

- (a) The usefulness of modern education.
- (b) The arts and crafts of Modern Tibet and the adjoining districts.
- (c) Tibetan festivals.

### TAMIL VERNACULAR

Paper-Setters— { RAO BAHADUR L. K. ANANTHAKRISHNA AIYER,  
 B.A., L.T.  
 MAHAMAHOPADHYAY VEDANTAVISARAD ANANTA-  
 KRISHNA SASTRI.

Examiner—{ MAHAMAHOPADHYAY VEDANTAVISARAD ANANTA-KRISHNA SASTRI.

Candidates are required to give their answers in their own words as far as practicable

The figures in the margin indicate full marks

கருவரை தெளிவுகளுடன் அடியிற் கண்ட குறன்களின் விளக்கவும்:— 15

(a) உயனுடையா னல் கூர்ந்தா னுதல் செயுநீர் செய்யா தமை கலாவாறு.

(b) இறலீனு மெண்ணு வெஃகின் விறலீனும் வேண்டாமை யென்றுஞ் செருக்கு.

2 அடியிற்கண்டச் சொற்களின் பொருள் யாதென விரெயுக:— 15

(a) எந்நன்றிகென்றார்க்கும்.

(b) ஞாலத்தறம்பொருள்.

(c) செய்யவட்டவ்வையை.

(d) இல்லென்று தீயவை செய்யற்க.

(e) பாத்தூண் மரீஇ யவனை.

(f) பகச்சொல்விச் கேளீர்.

3. பிறனில் விழையாமைக்குப் பின் பெற்றை யுடைமையையும் 10 வினையச்சத்திற்குப் பிறகு ஒப்புர வறிதலையும் வைப்பதற்கு காரணம் யாதென.

4. அடியிற் காணும் குறன்களின் தெளிவுரையை வினாந்து 20 அவற்றை யொட்டி ஓர் வியாஸம் எழுதுக:—

(a) விருந்துபுறத்ததாத் தானுண்டல்சாவா.

மருந்தெனினும் வேண்டற் பாற்றன்று.

(b) தானந்தவமிநண்டுத் தங்காவியனுலகம்

வானம் வழங்காதெனின்.

5. திருநீலகண்டரின் வரலாற்றைச் சுருக்கி வினாந்து ஞானஸம் 20 பந்தரின் திருநாமங்களையும்வற்றின் காரணங்களையும் விளக்கவும்.

6. Translate into Tamil:—

20

An Arab lost his way in the desert. He wandered about for two days without finding anything to eat, and he was now in danger of dying from hunger. At length he saw one of those pools where travellers water their camels. He hastened to it as fast as his tired limbs could carry him, but on reaching it he found that it was quite dried up. Just then he spied a large bag lying on the sand. He was glad to think that, perhaps, it contained water, and food too. With great difficulty he

managed to crawl to it, and began to feel it with his hands to find out what was in it. He felt that it was filled with little round things, and cried out, 'I hope they are dates or nuts'. On opening the bag he found they were pearls, which were as bad as nothing to a starving man.

## TELUGU VERNACULAR

*Paper-Setters*—{ MR. B. RAMCHANDRA RAU, M.A.  
PROF. S. RADHAKRISHNAN, M.A., D.LITT.

*Examiner*—DR. B. RAMCHANDRA RAU, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. గోపాలరావు గారి పుస్తకమునకు “అపూర్వ” నామము సార్థక 10  
మగునో విపులముగా వ్రాయుడు.

2. యద్ధభూమినందు “కృష్ణార్జునల” సంవాదము విశదముగా 10  
వ్రాయుడు.

3. మహాభారతము గొప్ప తత్వ శాస్త్రమని నీరి కోవిదులు చెప్పదురు. 20  
మీరు గ్రహించిన తత్వము నిరూపించుడు.

4. Translate the following passage into idiomatic Telugu :—

20

As a married woman her rights are somewhat interesting. You know under the Hindu Law a man is allowed to marry more than one wife. But among the educated and the cultured classes the men very rarely marry more than once. The law, however, says that there is no limit to the number of wives that a Hindu can marry. Several attempts have been made to introduce the principle of monogamy in the Hindu Law but they have not yet succeeded. Second marriages even among non-Hindu races are not allowed except on such definite grounds known to the law as divorce, &c. Similarly, the Hindu also should lead a monogamous life except for certain reasons. For instance, supposing he has no progeny, the Hindu Law allows adoption. This has caused a considerable amount of litigation in this city as well as throughout India. Out of every twenty or thirty cases that come up before the High Court you will find at least four or five where the whole trouble has arisen out of the law of adoption. And what is the law of adoption? It is that you take somebody else's son, perform a certain ceremony which is supposed to be a spiritual alchemy, and that son becomes your own. And all the trouble that this law has caused in Hindu society and the enormous amount of money wasted over the same is unlimited. You would be surprised if I gave you the figures.

5. ఈ క్రింది పద్యముయొక్క భావమును గ్రహించి వ్యాసము 10  
ప్రాయదు :—

“విఘ్నములు మెండు మంచిగావించునెడల  
క్రొత్తమతమన్ననే, ప్రాచీనకాలమొదలు  
కాన దద్దాస్త్రీ కొఱకు సంఘంబువలయు  
కలియుగంబున సాంఘిక బలమే బలము.”

6. Write an essay in Telugu on—

30

“జాతిభేదములు”

లేక

“దేశసేవ.”

### MALAYALAM VERNACULAR

Paper-Setter & Examiner—MR. C. E. ABRAHAM, M.A., B.D.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. ద్విగత శతావధానములకు దృష్టాంతముగా ఉపయోగించుటకు 10  
అనుకూలముగా ఉన్న గ్రామజీవితమునుబట్టి ఒక ఉపన్యాసము  
వ్రాయుట.

అందులో,

కావ్యమునకు నమూనాగా ఉన్న పుస్తకమునుబట్టి  
“వేదము” యొక్క నిర్ణయమును వివరించుటకు  
ఉపయోగించుట?

2. సాంఘిక విజయమును అభివృద్ధి చేయుటకు 10  
ఉపాధులు.

అందులో,

వేదమునకు ఉపయోగమును నిరూపించుట.

3. ജയസിംഹൻ, ലീല, കളമൻ, ഗുണസുന്ദരി, 15  
ഇവരിൽ ആരുടെ ഏങ്കിലും ഒരാളുടെ ചരിത്രം ചുരുക്ക  
മായി എഴുതുക.

അല്ലെങ്കിൽ,

താഴെപ്പറയുന്നവരിൽ ഒരാൾക്ക് കഥയിലുള്ള സ്ഥാനം  
'നിസ്സ'യിൽ നിസ്സയിക്കുക. —

ഔഷധയോഗിനി, ഭൂമി.

4. (a) അന്യഥാ ചിന്തിതം കായ്ക്കും 10

ദൈവമന്ത്രാചിന്തയേൽ.

(b) ഉപകാരോപി നീചാനാമപകാരായ വത്തതേ.

മേലെഴുതിയിരിക്കുന്ന പദ്യ ശകലങ്ങളിൽ ഏതെങ്കിലും ഒന്നിനെ (a or b) “ലീല” യിൽ നിന്ന് ഉദാഹരിക്കുക.

5. “മാതൃവികാഗ്നിമിത്രം”ത്തിലെ കഥ ചുരുക്കി 15  
എഴുതുക.

അല്ലെങ്കിൽ,

മാതൃവികാഗ്നിമിത്രം നാടകത്തിൽ നിങ്ങൾക്ക് കടുത്ത  
താല്പര്യമുള്ള ഒരു കഥാപാത്രത്തിന്റെ ഗുണഗണങ്ങൾ  
വിവരിക്കുക.

6. താഴെക്കാണുന്ന വിഷയങ്ങളിൽ ഏതെങ്കിലും 30 ഒന്നിനെക്കുറിച്ച് മൂന്ന് പുറത്തിൽ കവിയാതെ ഒരു ഉപന്യാസം എഴുതുക :—

- (a) കേരളത്തിലെ അന്ധ വിശ്വാസങ്ങൾ.
- (b) മലയാള ഭാഷാ പോഷണത്തിനുള്ള മാർഗ്ഗങ്ങൾ.
- (c) കൈകൊണ്ടുള്ള പ്രയത്നം (Manual Labour).
- (d) സ്വദേശ സ്നേഹം.

(e) “ജലത്തിനിര തടക്കാം; പഞ്ചഭൂതങ്ങളെ നിയന്ത്രിക്കാം; ചന്ദ്രമാരുതനെ ശമിപ്പിക്കാം; പ്രകൃതി രഹസ്യങ്ങളെ ഗ്രഹിച്ച് മനുഷ്യായുസ്സിനെ വളരെ ദീർഘമാക്കാം. എന്നാൽ വിചാര വികാരങ്ങളെ അടക്കി സ്വാതന്ത്ര്യം ലഭിക്കുക! അതാണ് വാസ്തവമായ അത്ഭുതം.”

7. Give a free translation of the following passage into Malayalam :— 10

*The greatness of Athens*

An athenian citizen does not neglect the state because he takes care of his own household; and even those of us who are engaged in business have a very fair idea of politics. We alone regard a man who takes no interest in public affairs, not as a harmless but as a useless character. In doing good, again, we are unlike others; we make our friends by conferring, not by receiving favours. We alone do good to our neighbours not upon a calculation of interest, but in the confidence of freedom and in a frank and fearless spirit.

KANARESE VERNACULAR

*Paper-Setter & Examiner—MR. P. APPAJI RAO, B.Sc.*

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into Kanarese :—

15

On the sea there are many pirates to meet whom is speedy death. The great ocean spreads out a boundless expanse. There is no knowing



east or west; only by observing the sun, moon, and stars was it possible to go forward. If the weather was dark and rainy the ship went on as she was carried by the wind without any definite course. In the darkness of the night only the great waves were to be seen breaking on one another, and emitting a brightness like that of fire, with huge turtles and other monsters of the deep all round. The merchants were full of terror, not knowing where they were going. The sea was deep and bottomless, and there was no place where they could drop anchor and stop. But when the sky became clear they could tell east and west and the ship went forward in the right direction. If she had come on any hidden rock there would have been no way of escape.

2. Write an essay on any *one* of the following subjects : —

20

(a) The rapid development of the use of electricity as a source of power, light, and heat : medical appliances—industrial efficiency—sanitation—other unknown possibilities.

(b) The pen is mightier than the sword.

(c) Self-help is the best help.

(d) Slave mentality.

3. Babhravahana—a man of honour. Discuss this statement with illustrations. 10

4. Write a short note on the ancestry of 'Raghu'. 10

5. Hidimbe turns a lover instead of a devourer. Why? 10

6. The story of Vikramorvasiya Nataka in about 80 words. 10

7. Paraphrase fully :— 15

ವಿಷಯೋಪಭೋಗಮಂ ಬಯಸಿ ನಿನಗಾ ನೊಲಿಯೆ ।

ವಿಷಯೋಗಮಾಗದಿದೇವದೇವ ಪೇಳ್ವರುಷರೀ ।

ವಿಷಯೋದ್ಭವಸ್ತ್ರೀಯರಂ ಬೆರಸಿ ಬಾರ್ಲವರೆ ಸಾಕದಂತಿರಲಿ ನಿನಗೆ ।

ರುಷಭಾಯತದೊಳಾಂತ ಭಟರೊಳ್ವಳಂಚುವ ವ ।

ರುಷಭಾಷಿತವನಬಲಿ ನಿನೊಳಾಡುವುದು ಹಿ ।

ರುಷಭಾವಮಲ್ಲಿ ಬಿಡು ವಾಚಿಯಂ ಪೆಣ್ಣೊಲಿ ಗಳುಕುವೆನೆಂದಂ

ಪಾಠಕನು ||

8. Explain the meanings of the following words and expressions :— 10

(a) ಲಕಟ, (b) ಭುಜಬಲ, (c) ಕರುಮಾಡಂ, (d) ಪಸುಳಿ, (e) ಚಿತ್ತ  
ಚಂಚಲ, (f) ಚೂಡಾರತ್ನ.

SINHALESE VERNACULAR

Paper-Setter and Examiner—REV. P. SEELANANDA

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. (a) Explain the following verses :—

20

දියනෙක් පැතිර සිටි බුදු ගුණ කියා හැම  
සගමොක් ලබනුවස් පිය සුග ධර්මාබ්මි  
සියසක් පුරා දුටුමෙන් තුටුවැ මුනිතුම  
වදු ලක් නිලන ගෙහි වැඩ උත් මහ පිළිම

පරසිදු පබ්බ දාන් සෙවි පමණින් මහ රු  
බෙලෙනිදු මද උවන නො කෙරෙහි රුසුන්  
සරු බරණිදු ගෙලෙ වසන නාරද  
වෙමින් ගරු ගුරුලාදු අතින් ඇසි  
කිම යහලු තොරතුරු.

(b) Write a short note on the author of *Selaḥiniṁ Sandesa*.

(c) Paraphrase and give short notes on the underlined words :—

තරසර සුනෙර තද තෙද දිමුතු දිවසු ර  
සුවතර ගැබර සමුදුර තුළුම නිලඩ ර  
සොමබර පවර නිසසුර නුමණ සුරගු ර  
සුරවර දෙ සැර විහාසා නම් කාලණිසු ර

2. Translate the following into English :—

20

එබැවින් කාගේ රට ගොවිකම් කට්ටි යනව  
බිජු බත් හදලූ කුකි සිහිවැල් දෙනු මැනව, සැමවැටි  
යටියනව ඔවු නොවුන් තුබු පරිද්දෙන් නිමද දිවෙල්  
තනතුරු ගම් නියම් ගම් දෙනුමැනව. ජිවිතියු  
නමත් කමත් කළමනා ගොවිකම් වෙණෙදම් ඇ  
කම්හි යෙදුනාහු රටනොපෙලහි. එසේ ඩන්නානා  
තව ධනාධානපයෝ බොහෝ රැස්වෙනා.

3. Translate the following into Sinhalese :—

20

All is peace. The heights of yonder metropolis, its towers and  
roofs, which you then saw filled with wives and children and countrymen  
in distress and terror, and looking with unutterable emotions for the issue

of the combat, have presented you to-day with the sight of its whole happy population, come out to welcome and greet you with an universal Jubilee.

4. Give a brief account of (a) Kutadanta Brahmin, (b) Manasa Prasna.

5. Write an essay in Sinhalese on one of the following :—

(a) The system of irrigation in ancient Ceylon.

(b) The downfall of Sinhalese dynasty.

(c) The Emperor Asoka.

20

### BURMESE VERNACULAR

Paper-Setters— { MAUNG WE LIN.  
,, BA, B.A.

Examiner—PROF. PE MAUNG TIN, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. (က) အောက်ပါလင်္ကာစာပိုဒ်၏အဓိပ္ပါယ်အရ ဆိုသောစကားများမှာမည်သူကမည်သူအားမည်သို့သောအကြောင်းနှင့်စပ်၍ပြောဆိုကြောင်းရေးသားဖော်ပြပါ။ 40

ငှင်းစာပိုဒ်တွင် ဥပမာဆောင်၍ပြသောဝတ္ထုပုံသက်သေတခုခုကိုအကျယ်ရေးသားဖော်ပြပါ။

ထိုမှတစ်ကြောင်း၊ သူတော်ကောင်းနှင့်၊ ပေါင်းမိသောအား၊ ကောင်းကျိုးများကို၊ လွန်ငြားကာလ၊ ကြံတွေးဆသော်၊ ရှေးကမြဲလွှဲအတ်၊ အဘသတ်အား၊ သူမြတ်ချာန်ရ၊ သံဟိစ္စလျှင်၊ တေဇလွန်က၊ ပါယ်ငရဲကို၊ ခွဲလျက်ပြသ၊ ကွပ်ဆုံးမ၍၊ ကြီးလှသောအား၊ ဆင်းရဲများမှာ၊ တရားစိမ့်ရေ၊ ချမ်းသာစေ၏၊ မိတ်ဆွေဖွဲ့ကြ၊ သဟာယမြင့်၊ သိမ်းမသိမ်းဖို၊ ဥပဋ္ဌိသိုသော်၊ ဝံလှီနှင့်လိပ်၊ အိုင်ရေဆိပ်ဝယ်၊ စုံရိပ်ပျော်မွေ့၊ ရွှေခြံသေ့ထို၊ ဝန်း၍ညီညွတ်၊ ဆီးကြကာလျက်၊ ချမ်းသာစေဟန်၊ တိရစ္ဆာန်မျှ၊ နိဗ္ဗာန်နတ်ရွာ၊ ရောက်စိမ့်ငှါလျှင်၊ မိဂါဟံသ၊ ကျေးသူဝကြောင့်၊ ရှေးကမင်းများ၊ ကျေးဇူးပွားဟု၊ စကားခုတိုင်၊ မဆုံးနိုင်တည့်၊ ငြိမ်းခိုင်ပုံပေါင်း၊ ဂုဏ်နွဲ့လောင်းသည်၊ သူကောင်းတရား၊ တကြိမ်ကြားက၊ မှတ်သားစိစိ၊ နားမသိလည်း၊ ရောက်ဘိနတ်ရွာ၊ ကမ္မည်းစာကို၊ ထင်စွာပြက်ပြက်၊ သိခေါက်ရက်ကြောင့်၊ ငဲ့ကွက်မခွ၊ စောင့်သိလနှင့်၊ ရှင်ဘခေါ်ရာ၊ ကျွန်ုပ်ပါလိမ့်၊ အာဏာမဆန်ဝံ့ပြီတည်း။

(ခ) ရေစကြိုခုံတော်ဖြတ်ထုံးတွင်ပါရှိသည့်စီရင်ထုံးများအနက်

(၁) ဒိန်နက်သဲဆင်းမဆို၍နှုတ်လွန်မှုတရား၊

(၂) မိမင်းမြို့ကိုလင်မရှိခိုက်၊ မိမင်းပုရိုက်နှက်ဆုံး မသည်ဆို၍  
စွတ်စွဲမှုတရားများတွင်၊ တရားလို၊ တရားခံရွှေနေတို့လဲဆိုချက်၊ တရား  
သူကြီးတို့ထင်မြင်ဆုံးဖြတ်ချက်များကိုရေးသားဖော်ပြပါ။ သို့မဟုတ်။  
ခုံတော်တို့ကိုတရားဥပဒေအပ်ပုံနှင့် ခုံတော်တို့ကိုပေးအပ်သော  
ဥပဒေများကိုရေးသားဖော်ပြပါ။

(ဂ) နရသီဟပတေ့မင်း၏အကျင့်အလေ့ထူးခြားပုံအကြောင်း  
ကိုရေးသားဖော်ပြပါ။ သို့မဟုတ်။

ရာဇသင်္ကြံအမတ်၏အကြောင်းအတ္ထုပ္ပတ္တိကိုရေးသားဖော်ပြပါ။

2. အောက်ပါလင်္ကာ စာပိုဒ်၏ အဓိပ္ပာယ်ကိုဖော်ပြ၍စကား ပြင်

15

ဘာသာလဝါ၊ နှုတ်ယူငှါနှင့်၊ လာလာသသူ၊ ရှင်လူပုဂ္ဂိုလ်တို့  
သည်အားလည်း၊ စကားနှုတ်ဆက်၊ မေးလင့်လျက်တည်း၊ လိုက်ဘက်  
သင့်ထွေ၊ ထွက်နပ်စေလျက်၊ တဲနေဓသာခါ၊ အုံးအိပ်ရာနှင့်၊ မြူတာအိုး  
ပြစ်၊ မျက်သစ်ဒန်ပူ၊ ရေကွမ်းဟူသား၊ ဆောက်ဦတကွ၊ ဝတ်ကုန်လှ  
၏၊ ခြံပခြံတွင်း၊ အိမ်နီးချင်းတို့၊ တောင်းတင်းပိဿာ၊ ငှါးလင့်ပါလည်း၊  
လွယ်ကာပေးကမ်း၊ ဖျားနာစမ်းလျက်၊ အခမ်းအနား၊ ရှိတုံငြါးလည်း၊  
တတ်အားသမျှ၊ ကူဘော်ရ၏၊ ကြီးမှကျင့်ထုံး၊ ဘွယ်ရာသုံး၍၊ သား  
လုံးငါးကောင်၊ လက်ဆောင်ယူလောက်၊ လပ်သပ်ရောက်လည်း၊  
အလျောက်အပစ်၊ ငှတေတတ်ဟု၊ ညီညွတ်လူမိုလ်၊ ဘုန်းရိပ်ခိုသည်၊  
ချစ်ဆိုကောင်းချီးထွန်၏တည်း။

3. Translate into Burmese :—

15

#### A DELIGHTFUL VIEW

I counted more than twenty lakes at different levels, below me ; some brilliant and shining like polished mirrors ; others not less beautiful, dark and solemn with some mighty mountain shadow. As I looked upward, the mountains reared their huge crests, one above the other, to the farthest an eye could reach. Towards the opposite side, the calm and tranquil sea lay beneath me, bathed in the yellow gold of a rising sun ; a few ships were peaceably lying at anchor in the bay ; and the only thing in motion was a row boat, the heavy monotonous stroke of whose oars rose in the stillness of the morning air. Not a single habitation of man could I descry, nor any vestige of a human being

4. မြန်မာစာစီကုံးရေးသားရာ၌ ဥပစာစကား ကိုအသုံးပြုသဖြင့် 10  
မည်ကဲ့သို့အကျိုးရှိပါသနည်း။

သဒ္ဒါသုစာနှင့် ကရဏူပစာတို့၏ အဓိပ္ပါယ် ကိုဥဒါဟရဏ်နှင့်  
တကွပြပါ။

5. အောက်ပါအကြောင်းအရာတို့အနက်တခုခုကိုစီကုံးရေးသားပါ။ 20

(က) ယူနီဘာစီတီစာပေသင်ကြားခြင်း၏ အကျိုးကျေးဇူး

(ခ) မင်းမှုထမ်းခြင်းနှင့်ကုန်သည်လုပ်ခြင်း အကျိုးအပြစ်

(ဂ) မြန်မာလူမျိုးသို့ယခုခေတ်ကာလအနေအထိုင်အဝတ်  
အငှားပြောင်းလဲခြင်းအကြောင်းနှင့် ၎င်း၏အကျိုး  
အပြစ်။

## PORTUGUESE VERNACULAR

*Paper-Setter and Examiner—DR. P. D. BRAGANCA CUNHA*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate and discuss the following verses of Junqueiro :— 30

A's commend'as diamantinas  
Prefere os lírios nevados.  
E as blouses garibaldinas  
A's hecas dos advogados.

Nao procura o bene-placito  
Da corte ou da santa sé :  
Depois de jantar com Tacito,  
Vae ceiar com Rabelais,

A's grandes festas hipocritas  
Do mais brilhante palacio  
Prefere a aurea mediocritas,  
O encanto do velho Horacio.

Detesta graves pedantes :  
Ama o justo, o bello, o nu.  
Tem relação com Cervantes,  
E trata Voltaire por tu.

2. Write what you know about Alexander Heroulano and his prose. 25

3. Write an essay in Portuguese on :— 30

'Nao ha agua mais perigosa que a que nao sôa'.

4. Give examples in Portuguese of *two* forms of the infinitive 10  
 (a) impersonal, (b) personal.
5. Translate :— 5  
 'Porque nao me estuda ?'  
 'Nao me sais d'aqui !'

## ENGLISH

## ALTERNATIVE PAPER

*Paper-Setters*.— { REV. FATHER F. X. CROHAN, S.J.  
 { MR. HIRANKUMAR BANERJEE, M.A.

*Examiner*—REV. FATHER L. BRYAN, S.J.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, By what standards does Browning in the *Grammarians's Funeral* measure the achievement of life's purpose ? 15  
*Or*, Give briefly the sequence of thought in the *Lotus Eaters*, and point out the features of Tennyson as a poet that the poem illustrates.
2. Explain briefly any *two* of the following extracts, noting allusions, 20  
 if any :—
- (a) O hark, O hear ! how thin and clear,  
 And thinner, clearer, farther going !  
 O sweet and far from cliff and scar  
 The horns of Elfsland faintly blowing !
- (b) Or hollowing one hand against his ear  
 To list a footfall ere he saw  
 The wood-nymph, stay'd the Ausonian King to hear  
 Of wisdom and of law.
- (c) Oh heart ! Oh blood that freezes, blood that burns !  
 Earth's returns  
 For whole centuries of folly, noise and sin !  
 Shut them in,  
 With their triumphs and their glories and the rest !  
 Love is best.
- (d) And though the fields look rough with hoary dew,  
 All will be gay when noontide wakes anew  
 The buttercups, the little children's dower  
 —Far brighter than this gaudy melon flower !
3. Write a note on Browning's use of the Dramatic Monologue. 15
4. *Either*, Comment on Black's statement that Goldsmith resorted to the hack-work of literature when everything else failed him, and support your arguments by making references to Goldsmith's earliest experiences in London. 15  
*Or*, What are the merits of *The Vicar of Wakefield* to which Black invites attention ? What is his estimate of the plot of the novel ?
5. Write brief notes on any *three* of the following :— 15  
*The Citizen of the World*, Beau Nash, the pertinacious young laird of Auchinleck, Paddy Byrne, *The Haunch of Venison*, *Retaliation*.

6. Explain any two of the following extracts :—

(a) *The Vicar of Wakefield*, considered structurally, follows the lines of the Book of Job.

(b) He always maintained that fame was a shuttle-cock which could be kept up only by being beaten back, as well as beaten forward, and which would soon fail if there were only one battledore.

(c) It is poetical exigency rather than political economy that has decreed the destruction of the loveliest village of the plain.

(d) Goldsmith wrote in a pre-Wordsworthian age when, even in the realms of poetry, a primrose was not much more than a primrose.

### SANSKRIT

*Paper-Setters*— { MR. MURALIDHAR BANERJEE, M.A.  
 „ NILMANI CHAKRABARTI, M.A.  
 DR. BHAGABATKUMAR SASTRI, M.A., Ph.D.

*Head Examiner*—MR. BANAMALI CHAKRABARTI, M.A.

MR. PHANIBHUSHAN CHATTERJEE, M.A.  
 SURENDRANATH BHATTACHARYYA, M.A.  
 JYOTISHCHANDRA GHATAK, M.A.  
 ADITYAKUMAR BHATTACHARYYA, M.A.  
 GIRINDRANARAYAN MALLIK, M.A.  
 SIBADAS BANERJEE, M.A.  
 ATULCHANDRA BANERJEE, M.A.  
 JATINDRANATH BHATTACHARYYA, M.A.  
 RAMSARAN GOSH, M.A.  
 BHOLANATH CHATTERJEE, M.A.  
 HARIPADA SENGUPTA, M.A.

DR. SUDHENDUKUMAR DAS, M.A., Ph.D.

MR. AKSHAYKUMAR BHATTACHARYYA, M.A.

„ SADANANDA BHADURI, M.A.

„ BIPINBIHARI GUHA.

„ BHABABIBHUTI BHATTACHARYYA, M.A.

*Examiners*— { „ DINESCHANDRA BHATTACHARYYA, M.A.

„ ATULCHANDRA DASGUPTA, M.A.

( Looked over answer-papers written in  
 Devanagari character. )

MR. BASANTAKUMAR CHATTERJEE, M.A.

( Looked over answer-papers written in  
 Uriya character. )

MR. MAHESWAR DAS, M.A.

( Looked over answer-papers written in  
 Telugu character. )

MAHAMAHOPADHYAY VEDANTABISARAD

ANANTAKRISHNA SASTRI.

( Looked over answer-papers written in  
 Marathi character. )

MAHAMAHOPADHYAY PANDIT SITARAM SASTRI.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English one only from Group A, two only from 5 × 5  
Group B, and one only from Group C :— = 25

## GROUP A

- (a) ततो मृगेन्द्रस्य मृगेन्द्रगामी  
वधाय वध्यस्य शरं श्रेष्ठ्यः ।  
जाताभिषङ्गो नृपतिर्निषङ्गा-  
दुद्धत्तमैच्छत् प्रसभोद्धृतारिः ॥
- (b) भक्त्या गुरौ मय्यनुकम्पया च  
प्रीतास्मि ते पुत्रं वरं वृणीष्व ।  
न केवलानां पयसां प्रसूति-  
मवेहि मां कामदुघां प्रसन्नाम् ॥

## GROUP B

- (a) रक्षांसि वेदां परितो निरास्थद्  
अङ्गान्ययाक्षीदभितः प्रधानम् ।  
क्षेपाव्यहौषीत् सुत-सम्पदे च  
वरं वरेण्यो नृपतेरमार्गीत् ॥
- (b) निष्ठां गते दत्त्रिम-सभ्य-तोषे  
विहिलिमे कर्मणि राजपत्न्यः ।  
प्राश्रुर्दुतोच्छिष्टमुदार-वंश्या-  
स्त्रिस्तः प्रसोतुं चतुरः सुपुत्रान् ॥
- (c) दौवारिकाभ्याहत-शक्रदूतं  
सोपायनोपस्थित-लोकपालम् ।  
साशङ्कभीष्मास-विशन्निशाटं  
द्वारं ययौ रावणमन्दिरस्य ॥
- (d) मार्गं गतो गोक्षगुरुभृगूणा-  
मगस्तिनाध्यासितविन्ध्यशृङ्गम् ।  
संरक्ष्यते शक्रपुरोहितोऽङ्घ्रि-  
क्ष्मां कम्पयन्त्यो निपतन्ति चोल्काः ॥

## GROUP C

- (a) क्लेशोऽधिकतरस्तेषामव्यक्तासक्तचेतसाम् ।  
अव्यक्ता हि गतिर्दुःखं देहवन्निरवाप्यते ॥



- (b) सन्तुष्टः सततं योगी यतात्मा हृदिनिश्चयः ।  
मध्यर्पितमनोबुद्धिर्यो मन्त्रक्तः स मे प्रियः ॥

2. Either, Write out in English or Sanskrit the gist of Kumbha-karṇa's address in the war-council. 8

Or, Give an account in English or Sanskrit of Dīlīpa's rules of conduct while in attendance on Nandīnī,

Or, Indicate in a few short sentences in English or Sanskrit the essence of the cult of devotion as taught by the Lord in the *Bhagavadgītā*, chapter XII.

3. (a) Account for the case-endings in any three of the following :— 8

- (i) प्रीतास्मि ते । (ii) वेदीं परितः ।  
(iii) अहौषीत् सुतसम्पदे । (iv) अगस्तिनाऽध्यासितः ।

(b) Derive any three of the following :— 3

- (i) श्रेष्ठः । (ii) प्रसूतिम् । (iii) शेषाणि ।  
(iv) विहित्रिमे । (v) दौवारिकैः । (vi) भीष्माः ।  
(vii) निशादाः । (viii) कामदुघाम् ।

(c) Expound all the *samāsas* in (c) or (d) in Group B ( Question 1 ), explaining in the latter case why अगस्तिना is not compounded. 4

4. (a) Fully explain in your own words and in short sentences in Sanskrit any one of the verses in any group quoted above (Question 1). 5

(b) Indicate the allusion in अगस्तिनाऽध्यासितविश्वरूपम् or the nature of the boon actually prayed for by the king. 2

5. (a) Correct the errors in any five of the following, briefly indicating your reasons :— 15  
(5 × 3)

- (i) न रोचते मां मोदकः ।  
(ii) अपि हरेः सुराः ।  
(iii) अम्बे लायस्व माम् ।  
(iv) पितृणां पूर्वार्णां पन्थानमनुसरत ।  
(v) इयं मम सखिरागता ।  
(vi) शिवानि, रक्ष शरणागतम् ।  
(vii) तद्धिन्मानसौ मेघः ।  
(viii) आर्य्याणां पथा सञ्चरत यूयम् ।  
(ix) गुणिनां रीतिमनुकुरुध्वम् ।  
(x) अनुगङ्गा वाराणसी पुरी ।

( Justify where possible.)

(b) (i) Either, Explain and illustrate in short sentences the difference between समाहारविशु and समाहारवन्ध. 6

Or, Frame sentences of your own to show where राजाङ्गः सखिबन्धः is applied and where it is not.

(ii) *Either*, Give two instances to show that sometimes words, differing in form though derived in the same way, give different meanings. 4

*Or*, Note the difference in the uses of लङ्, लुङ्, and लिट्, and use them correctly.

6. Translate into Sanskrit any five of the following :— 5 × 5

(a) Everybody wants peace; but for the sake of that very peace, everybody is at war with his neighbour. = 25

(b) Nothing pleases God more than love for His creatures; love leads to heaven.

(c) Why quarrel with your brothers? There is none who is not God's own child like you.

(d) Don't bear any ill-will against any person; it torments you more than the one whom you consider your enemy.

(e) Always try to think that man is good by nature; circumstances only make him bad.

(f) Never judge in haste; generally repentance follows a hasty judgement.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any three of the following :—

3 × 5  
= 15

(a) अथापश्यमनेकानि गोसहस्राणि वर्णशो विविक्षानि ; तमहम-  
पृच्छम्—“कस्येमा गावः ?” इति ; सोऽब्रवीत्—“मया निसृष्टा एताः”  
इति । तेन च स्वयं श्लाघते कथितेन ।

(b) तस्मिन्नपि कालं प्रतीक्षमाणः, सङ्गाच्च भृशमुद्विग्नः, आत्म-  
सहचरः, शुष्कपर्णतृणवीरुषा वर्तमानो मृगतृक्षिमित्तावसानमेव गणयन्मृग-  
शरीरं तीर्थोदकक्लिन्नमुत्सर्ज ।

(c) ततः प्रभृति सुतरां देवताराधनेषु, ब्राह्मणपूजासु गुरुजन-  
सपर्यासु चादरवती बभूव । यद्यच्च किञ्चित् कुतश्चिच्छ्राव गर्भतृणया  
तत् सर्वं चकार । न महान्तमपि क्लेशमजीगणत् ।

(d) रोषारुणनयनास्ते बहुधा मां निरभर्त्सयन् । ततस्तेषां  
भाषणपारुष्यमसहिष्णुरहमवनिसुररक्षणाय चिरं प्रयुज्य तैरभिहतो गत-  
जीवितोऽभवम् ।

(e) तत्र यथासुखमासीनः काव्यगोष्ठीं प्रवर्त्तयेत्, भावयेत्, परीक्षेत  
च । वासुदेव-सातवाहन-शुद्धक-साहसाङ्गादीन् सकलान् सभापतीन्  
दानमानाम्यामनुकुर्यात् ।

2. (a) Account for the case-endings in any *three* of the following  $2 \times 3$   
(underlined) :— =6

- (i) सङ्गादुद्दिग्धः । (ii) ततः प्रभृति ।  
(iii) कुतश्चित् (शुश्राव) । (iv) पारुष्यमसहिष्णुः ।

(b) Either, Write historical notes on any *two* of the following :— 8

- (i) वासुदेव । (ii) सातवाहन । (iii) शुद्रक । (iv) साहसाङ्ग ।

Or, Write in Sanskrit or English in a few lines the story that illustrates—Charity is spoilt by boastfulness.

(c) Either, Derive any *three* of the following :— 8

- (i) वर्णशः । (ii) क्लिन्नः । (iii) सपर्य्या ।  
(iv) बहुधा । (v) सहिष्णुः । (vi) आसीनः ।

Or, Expound the *samāsas* in आत्मसहचरः and रोषारुणनयनाः ।

3. (a) Explain and illustrate the difference in the meanings of any  $3 \times 2$   
*two* of the following :— =6

(i) मासेन अधीते and मासम् अधीते or फलेन अलम् and फलाय अलम् ।

(ii) विवदन्ति and विवदन्ते or संप्रहरन्ति and संप्रहरन्ते ।

(iii) पितृमत् and पितृवत् or गाङ्गः and गाङ्गेयः ।

(iv) सुगन्धिः and सुगन्धः or महद्बुद्धिः and महाबुद्धिः ।

(b) Use any *three* of the following in suitable sentences of your own :—

- (i) आह् in भय्यादा or अभिविधि ।  
(ii) तन् or णिनि in शीलार्थ ।  
(iii) क्त and तव्य in भाववाच्य ।  
(iv) सर्व्व as a noun or विश्व as a pronoun.  
(v) उपाध्याय or आचार्य्य with the appropriate feminine suffix to mean a female teacher.

4. Translate into English any *three* of the following :—

$10 \times 3$   
=30

(a) ततो वसन्ते समनुप्राप्ते राजा यष्टुं मनश्चकार । शिरसा तं विप्रं प्रणम्य कुक्ष्य सन्तानार्थं यज्ञाय च वरयामास । स च राजानं तथास्त्वित्युवाच । आदिदेश एनम्—सरय्या उत्तरे तीरे यज्ञभूमिर्विधीयतामिति ।

(b) ततः सुमन्त्रेण वेदपारगा ब्राह्मणास्तत्र समानीताः । धर्मात्मा राजा तान् यथाविधि पूजयित्वा प्रोवाच—पुस्तार्थमश्वमेधेन यक्ष्य—इति मे मतिः । ऋषि—पुस्तस्य प्रभावेण सिध्यतु स मे कामः । प्रार्थयेद्दुहमत्र भवतामनुमतिम्—इति ।

(c) ब्राह्मणास्तदा साध्विति तद्वाक्यं प्रत्यपूजयन् । प्रत्युच्यते ते नृपतिम्—राजन्, धार्मिकीयं ते बुद्धिः पुस्तार्थमागता । सर्व्वथा चतुरोऽमितविक्रमान् पुत्त्रान् प्राप्स्यसि । सम्भ्रयन्तां यज्ञसम्भाराः तुरगश्च यज्ञस्य विमुच्यतामिति ।

(d) मुक्तस्तुरगः संवत्सरे पूर्णे पुनः प्राप्तः । अथ राज्ञो यज्ञः प्रावर्त्तत । अस्मिन् महायज्ञे वेदपारगा याजका विधिवत् कर्म कुर्वन्ति । तेषां मन्त्रशक्त्या देवास्तत्र समागताः । न तत्र किञ्चिदन्यथा हुतं न वा स्खलितम् ।

5. Translate into Sanskrit any five of the following :—

5 × 5  
= 25

(a) The Himālaya mountain is the highest mountain in the world; Gaurisankara is the name of its highest peak.

(b) The sacred river Ganges rises in the Himālayas; it flows through different parts of Āryāvarta into the Bay of Bengal.

(c) The two sides of the river are studded with holy shrines all along the banks; they are resorted to by pilgrims from north and south.

(d) Benares is the most famous place of pilgrimage on the banks of the Ganges; the town owes its name to the two small streams Aśi and Baruṇā that flow close by.

(e) Prayāga is another important town on the same river; it stands on the confluence of the Ganges and the Yamuna.

(f) It is said that people who bathe here immediately go to heaven; the month of Māgha is held as most sacred for the purpose.

## PĀLI

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any three of the following extracts, adding 24  
tes on the italicized words :—

(a) Bhagavā—“Cittam mama assavaṃ vimuttaṃ ।  
dīgharattaṃ paribbāvitam sudantaṃ,  
pāpam pana me na vijjati, ।  
atha ce patthayasā pavassa deva.”

Dhaniyo Gopo—“Attavetanabhato' ham asmi ।  
puttā ce me samāniyā arogā,  
tesaṃ na supāmi kiñci pāpaṃ, ।  
atha ce patthayasā pavassa deva.”

(b) Na tena bhikkhu bhavati yāvatā bhikkhate pare  
 Vissam dhammam samādāya bhikkhu hoti na tāvatā.  
 Yo' dha puññañ ca pāpañ ca bāhetvā brahmacariyavā  
 Saṁkhāya loke carati sa ve bhikkhū' ti vuccati.

(c) Karoṭha Buddharacanañ, khaṇo ve mā upaccagā !  
 Khaṇātītā hi socanti niraṇṇamhi samappitā ||  
 Paṇādo raḥ sabbhaddā, paṇādanopatito raḥ !  
 Appamādena vijjāya abbahe sallam attano ti ||

(d) Rājaputtañ upāgañchi sabbābharaṇabhūsitā !  
 uḍḍesi rukkhamūlasamīṇ sayanañca mahārahañ ||  
 Sāṇiyā suparikkhittam rītānasamalaṇhikatañ !  
 tam disvā rājatanayo pekkhañ attham anāgatañ ||

2. Explain one of the following stanzas, bringing out fully its bearing on the teaching of Buddhism :— 10

(a) Socati puttehi puttimā,  
 gomiko gohi tath' eva socati !  
 Upadhī hi narassa socanā,  
 na hi so socati yo nirupādhiñ ||

(b) "Sabbe saṁkhārā aniccā" ti yadā paññāya passati ||  
 atha nibbindati dukkhe, esa maggo visuddhiyā ||

3. Either, (a) Give an account of the Council of Mahākassapa, with special reference to the constitution of the *Navaṅgaṇi Saṁṭhusāsanaṁ*. 10

Or, (b) Narrate the life of Buddhaghosa, and determine his place in the history of Pāli Buddhist literature.

4. Write notes on :— 6

*Either, (a) Lālavasiyo. (b) Bodhimanda, and (c) Tambapaṇṇi.*

*Or, (a) Revato thero, (b) Anuruddho, and (c) Sihabāhu naringo.*

5. Expound the *samāsa* in any four of the following :—*dukkhasamup-* 6  
*pādaṁ, paṇṇasikūladharanā, punabbhavo, raṇṇagandhañ, attavetanabhato,*  
*daḥhaparakkama.*

6. Conjugate the root *qaha* or *dis* in the present indicative, and the root *as* or *kar* in the aorist. 9

7. Decline *itthi* or *jāti* and *ahañ* or *tañ* in all the cases and numbers. 10

8. Translate into Pāli any two of the following passages :— 25

(a) Once on a time, the Lord was travelling in a village in Magadha. At that very time five hundred ploughs of Bharadvāja were being employed for sowing. In the afternoon the Lord took his alms-bowl and went to the place where the Brahmin was working.

(b) At that time the Brahmin was distributing food amongst other Brahmins. The Lord went to him and stood for alms. The Brahmin said unto the Lord : 'I plough my land and sow. After ploughing and sowing I get my food. Oh ! Samaṇa, you also plough and sow and get your food by ploughing and sowing.'

(c) Buddha was a great man. The law which he preached is still respected in different parts of the world. He felt for the distressed people, left his home and family and meditated for long years in order to find out the way. He found out the way by which the sufferings of humanity could be removed.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any *three* of the following passages :— 21

(a) Bodhisatto pana dhammāsanato otaranto dhammakathiko viya nissenito otaranto puriso viya ca dve ca batthe dve ca pāde pasāretvā tthitako mātukucchisambhavana kenaci asucinā amakkhito suddho visado Kāsikavatthe nikkhittamanīratanaṃ viya jotanto mātukucchito nikkhami Evaṃ sante pi Bodhisattassa ca Bodhisattamātuyā ca sakkārattham. ākāśato dve udakadhārā nikkhamitvā Bodhisattassa ca mātu c' assa sarīre utum gāhapesum.

(b) Yadā Bhagavā aññāsi Yasam kulaputtam kallacittam muducittam vinivaranacittam udaggacittam pasannacittam atha yā buddhānaṃ sāmukkaṃsika dhammadesanā taṃ pakāsesi : dukkham samudayaṃ nirodham maggaṃ. Seyyathā pi nāma suddham vattham *apagatakalākaṃ samma-d-e-va* rajanaṃ paṭigāṇheyya evaṃ eva Yasassa kulaputtassa tasmiṃ yeva āsane virajam vitamalaṃ *dhammacakkhuṃ* udapādi "yaṃ kiñci samudayadhammaṃ sabbaṃ taṃ nirodhadhammaṃ" ti.

(c) Mā kuñjara nāgam āsado, dukkham hi kuñjara nāgamāsado, na hi nāgahatassa kuñjara sugati hoti ito param yato, Mā ca mado mā ca pāmado, na hi pamattā sugatiṃ vajanti te, tvaṃ neva tathā karissasi yena tvaṃ sugatiṃ gamissasi ti.

(d) "Etaṃ hi Mālunāyāputta *atthasamhitam* etaṃ ādibrahmacariya-kam etaṃ nibbidāya virāgāya nirodhāya upasamāya abhiññāya sambodhāya nibbānāya samvattati, tasmiṃ taṃ mayā vyākataṃ. Tasmā ti ha Mālunāyāputta avyākataṃ ca me avyākato dhāretha, vyākataṃ ca me vyākato dhāretā" ti. Idam avoca Bhagavā. Attamano āyasmā Mālunāyāputta Bhagavato bhāsitaṃ abhinandī ti.

2. Explain fully *one* of the following gāthās :— 8

(a) Yadā have pātubhavanti dhammā ātāpino jhāyato brāhmaṇassa. ath' assa kaṅkha vapayanti sabbā yato pajānāti sahetu dhammaṃ ti.

(b) Yam vadanti na taṃ mayham ye vadanti na te aham, evaṃ pāpima jānāhi, na me maggaṃ pi dakkhasi ti.

3. Write notes on any *three* of the following :— 9

(a) Avijjāpaccayā saṅkhārā.

(b) Dve antā pabbajitena na sevitaḥ.

(c) Aniccā vata saṅkhārā.

(d) Cha ajjhattikāni āyatanāni.

(e) Taṃ jivam taṃ sarīraṃ, aññaṃ jivam aññaṃ sarīraṃ.

4. Either, Enumerate the ten precepts 5

Or, Explain what is *Sammādiṭṭhi* (right views) according to the Buddhists.

5. Either, Summarize the legend of the Weaver's daughter. 7

Or, Comment in Pāli on the following stanza :—

Andhabhūto ayaṃ loko, tanuk' ettha vipassati,  
sakunto jālamutto va appo saggāya gacchatī ti.

6. (a) Expound the samāsas in any *three* of the italicized words in Question 1. 5

(b) Give the derivation of any four of the following words :— 4  
*ghuṭṭham*, *sampaṭicchitvā*, *obhaggo*, *saṁviggō pavedhamānam*, and  
*pabbajjya*.

7. State the rules for the formation of feminines in Pāli. 5

8. Give either the optative forms of *chid* and *kar*, or the aorist forms of *dis* and *nā*. 6

9. Translate into English only two of the following passages :— 30

(a) Kassapassa ca bhagavato sāsane pabbajitvā Punnā sīlasam-  
 panna bahussutā dhammadhorā dhammakathikā ca ahoṣi. Māna-dhātu-  
 kattā pana kilese samucchinditum nāsakkhi, mānopanissayavasena  
 kammasa katattā imasmim buddhuppāde Anāthapinḍikissa seṭṭhino  
 gharadāsiyā kucchimhi nibbatti.

(b) Atthi Sakyakule jāto buddho appaṭipuggalo  
 so me dhammam adesesi diṭṭhinaṃ samatikkamaṃ.  
 Tassāhaṃ vacanaṃ sutvā vihāri sāsane ratā  
 tisso vijjā anuppattā kataṃ buddhassa sāsanaṃ.  
 Sabbattha vihatā nandi tamokkhandho padāliro  
 evaṃ jānāhi pāpina nibhato tvaṃ aṣi antakā ti.

(c) Atha ekadivasatū Saṇivarakumārāṃ vanditvā ekamantaṃ  
 ṭhitatū rājā pucchi : “ kiṃ tāta sippaṃ te niṭṭhutaṃ ” ti. “ Aṃa devā ” ti.  
 “ Tuyhaṃ janapadaṃ vārehi ” ti. “ Deva tumbhakaṃ pādamūlaṃ tucchāṃ  
 bhavissati, pādamūle yeva vasissāmi ” ti. Rājā tussitvā “ sādhu ” ti  
 sampaṭicchhi. Tato paṭṭhāya rañño pādamūle yeva hutvā Bodhisattaṃ  
 pucchi : “ tāta aññaṃ kiṃ karomi ” ti. “ Rājānaṃ ekaṃ purāṇa-uyyānaṃ  
 yacāmi ” ti.

(d) Daharā ca hi vuddhā ca ye bālā ye ca paṇḍitā  
 addhā c' eva daliddā ca sabbe maccuparāyaṇā.  
 Phalānaṃ iva pakkānaṃ niccaṃ papatanā bhayaṃ  
 evaṃ jātānaṃ maccānaṃ niccaṃ maraṇato bhayaṃ.

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## FIRST PAPER

(Candidates are required to give their answers in their own words  
 as far as practicable)

The figures in the margin indicate full marks

1. Translate into English any two of the following :—

25

قال رب بما انعمت على فلان اكرن ظهيرا للمجرمين -  
 فاصبح في المدينة خالفا يترقب فاذا الذي استنصره بالامس

يستصرخه - قال له موسى انك لغوى مبين - فلما ان اراد ان يبطش بالذى هو عذر لهما قال يموسى اتريد ان تقتلنى كما قتلت نفسا بالامس - ان تريد الا ان تكون جبارا فى الارض و ما تريد ان تكون من المصلحين - و جاء رجل من اقصى المدينة يسعى - قال يموسى ان الملا ياتمرون بك ليقتلوك فاخرج انى لك من النصحين -

B

قال بعضهم فى الكلب حصال حسنة لو كانت فى بني آدم لبلغ اعلى الدرجات ، كسر الجوع كالصالحين ، و ليس له مكان معروف كالمترككن ، و لا ينام الا قليلا من الليل كالمعبين ، و ليس له مال كالزهادين ، و لا يترك صاحبه و ان جفاه كالمريدين ، و يرضى بامى موضع من الارض كالمتراضعين ، و ينصرف الى مكان طرد منه الى غيره كالتراضين ، و اذا ضرب و طرح له شىء عاد اليه و اخذه من غير حقد كالخاشعين ، -

C

ثم ان عمر راي ان يجعل العطاء على حسب السبق الى الاسلام و الى نصرة الرسول عليه الصلوة و السلام فى مواطن حروبه ، ثم استخدم الكتاب فى الدراوين و امرهم بترتيب الطبقات و ضبط العطاء ، فقالوا بمن نبدأ يا امير المؤمنين فاشار ناس من الصحابة عليه بان يبدأ بنفسه وقالوا انت امير المؤمنين و تقديمك راجب ، فكره عمر ذلك و قال ابدؤا بالعباس عم رسول الله صلوات الله عليه و ببني هاشم ثم بمن بعدهم طبقة بعد طبقة و رضعوا ال الخطاب حيث رضعهم الله عز و جل ، فاعتمدوا ما اشار به و جرى الامر على ذلك مدة خلافته و خلافة عثمان رضى الله عنهما ، -



3. Answer any *three* of the following :— 12
- (a) Explain the allusion in the passage from the Qurān.
- (b) Account for the تقدیمك، العطاء، خصال، خائفا of اعراب in Question 1.
- (c) Give the ينصرف، يترقب، ياتمررون، استنصر and باب
- (d) Give the ينام، راضين، يضع، تريد of تعليل
4. Write short notes on any *two* of the following :— 8
- اگر یزید بسطامی، الامرون، امام غزالی
5. Correct the errors in the following :— 6
- (a) قدما هنا رجلان احدهما كريمة و الاخرى رذيل
- (b) رأيت المسلمون في حالة عرجهما و هبوطهما
- (c) لى كتاب جميلة لا مثل لها
6. Write in your own Arabic the story of سليمان عليه السلام and his feast, as you find it in your book. 8
7. (a) Enumerate either حروف مشبهة بالفعل or اسماء افعال and form sentences therewith. 7
- (b) Enumerate either افعال المدح و الذم or افعال مقاربة (عمل) and explain their government 4
8. Translate into Arabic :— 25
- Calcutta is the largest city in India. It is the capital town of the Bengal Presidency. Formerly it was the seat of the Government of India. The population of Calcutta is composed of the inhabitants of different towns and countries of the world. Calcutta is a great centre of learning, having a University and a large number of schools and colleges.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English either A or B :— 12

A

يا مسبح البحر البزيل و مسبل  
السر الجميل عيم طولك هائل  
با عالم السر الخفي و منجز  
الوعد الوفي قضاء حكمك عادل

صفاتك يا عظيم فجعل ان  
يعصي الثناء عليك فيها قائل  
و اذا دجا ليل الخطوب و اظلمت  
سبل الخلاص و خاب فيها الامل  
و ايسر من رجه النجاه فما لها  
سبب و لا يدنو له متنازل  
ياتيك من الطافه الفرج الذى  
لم تحتسبه و انت عنه غافل

B

و ما بعض الاقامه في ديار  
يهان بها الفتى الا عناء  
و بعض القول ليس له علاج  
كمحض الماء ليس له اناء  
يعب المرء ان يلقي نعيما  
و يابى الله الا ما يشاء  
و من يك عاقلا لم يلق بؤسا  
ينم يوما بساحته الاء  
تعاره بنات الدهر حتى  
تثلمه كما ثلم القضاء  
و كل شدائد نزلت بهي  
سيأتي بعد شدتها رخاء

2. Answer any three of the following :—

5 × 3  
= 15

(a) Give the **صيفه** and **باب** of **fire** of the following :—

تعارر ; ينم ; يلق ; داع ; يهان ; تحتسب ; عصمت

(b) Account for the **اعراب** of **five** of the following :—

شدائد ; يوما ; عاقلا ; عناء ; الرعد ; عظيم ; مسبق

(c) Write with full vowel-signs the opposite number of any **five** of the following :—

ناء ; فتى ; ماء ; سبل ; خطوب ; قضاء

(d) Write notes on five of the following expressions, explaining the grammatical forms and giving the precise meaning of the words :—

و اىست ؛ فجل ان يعصى ؛ عميم طولك هاطل ؛  
- سياتي ؛ كل شداىد نزلت بحى ؛ كمحض الماء ؛ من وجه النجاة

3. Write a brief note on ابر العتاهيه ؛ الاصمعي the poem which 3  
sent to معاويه - على

4. Translate into English either A or B :—

30

A

و ذكر انه لما قدم الرشيد البصرة قال جعفر  
بن يحيى للصباح قد عزم امير المومنين على الركوب  
في زلال في نهر الابله ثم يخرج الى دجله و احب  
ان يكون معه رجل عالم بالقصور و الانهار و القطائع  
ليصفها له فقال لا اعرف من يفى بهذا و يصلح له  
الاصمعي قال فائتني فاتيته فتحدث بين يدي جعفر  
فاضحكه و اعجبه فادخله الى الرشيد فركب معه فجعل  
لا يمر بنهر و لا ارض الا اخبر باصلها و فرعها و سمي  
الانهار و نسب القطائع فقال الرشيد لجعفر ربحك ما  
رايت مثل هذا قط من اين خضت عليه فقال جعفر  
يا امير المومنين و الذي شرفني بخطابك ان لي  
من كل ما مررت به موضع قدم فضحك الرشيد \*

B

و كانت ظفار مدينه الملك فى الدهر الاول فكان  
يقال من دخل ظفار حمر يعنى فليتعلم الحميريه و  
ليفهمها و ذلك ان زيد بن دارم وفد على بعض  
ملوك حمير فالقاه في متصيد له علي جبل مشرق  
فسلم عليه و انتسب له فقال له الملك نب بريد  
اجلس فظن الرجل انه امره بالسؤوب من الجبل فقال  
لتجدتني ايها الملك مطواعاً اليوم ثم رثب من

الجبل فهلك فقال الملك ما شأنه فخبروه بقصه  
الرجل و غلطه فى الكلمة فقال من دخل ظفار حمر  
و ظفار المدينة التي بها الملك و اراد بقوله حمر  
فيتعلم لغه حمير و قوله ثب فان الراتب الفراش  
بلغه حمير اى اجلس و هم يسمون الملك اذا كن لا  
يغزر موثبان يريدون انه يطيل الجلوس و لا يغزو \*

5. Answer any three of the following :—

5 × 3  
= 15

(a) What is the exceptive particle لا called in Arabic? Give the rules, with examples, of its construction in sentences.

(b) Explain fully the uses of التاكيد المضارع and give examples of its forms for all persons, singular and plural.

(c) Render the following into Arabic, supplying the vowel-signs :—  
2 women, 3 children, 10 swords, 45 wolves, 104 men.

(d) What is meant by عوامل قياسية?

(e) In what ways may الجملة الشريه be formed?

6. Translate into Arabic :—

10

(a) In the year 1315 of the Hira the king of that land was filled with greed and desire of conquest, and he went forth with a large army to attack one of the towns on the border of the neighbouring kingdom. This city did not submit to him, and so he besieged it for three months, till at last hunger made the inhabitants yield, which bloodshed had not been able to do.

(b) A famous saintly man said: I will not dwell in a place where the Law of God is not studied, for it is better than gold and silver. Besides, when man departs from this world, he is not accompanied with gold, but with the Law and good deeds; as it is said: When thou goest, it shall lead thee, i.e. in this world; when thou sleepest, it shall keep thee, i.e. in the grave; and when thou awakest, it shall talk with thee, i.e. in the future world.

15

## PERSIAN

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following :—

25.

A

شکر و سپاس و منت و عزت خدای را  
پروردگار خلق و خداوند کبریا  
دادار غیب و نگهدار آسمان  
رزاق بنده پرور و خلاق رهنما  
اقرار می کند دو جهان بریگانگیش  
یکتا و پشت عالمیان بر درش درتا  
گوهر ز سنگ خارا کند لؤلؤ از صدف  
فرزند آدم از گل و برگ گل از گیا  
بارے ز سنگ چشمه آب آورد پدید  
بارے ز آب چشمه کند سنگ ذره سا

B

پیر زنی را ستمی در گرفت  
دست زد و دامن سنبجر گرفت  
کای ملک آزرم تو کم دیده ام  
از تو همه سال ستم دیده ام  
شعنه مست آمده در کوی من  
زد لکدی چند فرا روی من  
بی گنه از خانه بروم کشید  
موی کشان بر سر کویم کشید  
در ستم آباد زمانم نه داد  
مهر ستم بر دل و جانم نهاد  
گفت فلان نیم شب ای کوزه پشت  
بر سر کوی تو فلان را که کشت

خانۂ من جست کہ خونی کجاست  
ای شہ ازین بیش زبونی کجاست

C

الہی غنچۂ امید با می  
گلے از روضۂ جاوید بنماے  
بخنددان از لب آن غنچہ باغم  
درین گل عطر پرور کن دماغم  
درین محنت سرائی بی مواسا  
بہ نعمتہای خویشم کن شناسا  
ضمیرم را سپاس اندیشہ گردان  
زبانم را ستایش پیشہ گردان  
ز تقویم خرد بہروزیم بخش  
بر اقلیم سخن فیروزیم بخش  
چو دل دادی ز گوہر گنج بر گنج  
ز گنج دل زیانم کن گھر سنج

2. Answer any four of the following :—

16

(a) Give in your own words the substance of :—

حکایت زندہ دلی کہ با مردگان انس گرفتہ بود

(b) Give a short account of the life of جامی

(c) Reproduce the 'Munājāt' of جامی

(d) Clear the allusion in :—

قصر نبوت بہ تو چرون شد بلند کسر بمقصورہ کسری نکند

(e) Describe the parable underlying :—

حکایت آئینہ ساختن بادشاہ صاحب جمال

3. Give the gist of the following lines in simple Persian :—

9

صوفی می رفت در بغداد زود در میان راہ آوازے شنود  
کان یکی گفت انگبین دارم بے می فروشم سخت ارزان کو کسے  
شیخ صوفی گفت اے مرد صبور می دہی ہیچی بہ ہیچی گفت دور  
تو مگر دیوانہ اے ہر الہوس کس بہ ہیچی کے دہد چیزے بکس

4. Answer any *two* of the following :—

18

(a) Analyse :—

بادشاهے بود نیکو شیرو چاکرے را داد روزے میرو

(b) What is مرکب امتزاجی ? Illustrate with *three* examples.

(c) Comment on the construction of ذرہسا in line 5, extract A, Question 1.

5. What are the various uses of کہ in Persian ? Illustrate them with examples. 7

6. Translate into Persian :—

25

Nāsir-i-Khusrau is a well-known Muslim traveller of the eleventh century, A.D. He travelled over the major portion of the countries of the Muslim empire of his times.

In an interesting book, called *Safarnāma*, he has recorded the experiences of his travels. He has described many important and picturesque buildings erected by the Umayyad and 'Abbāsīd caliphs. His description of Egypt is very interesting as he has given an account of the improvement of agriculture in the country. He visited important centres of learning in the East and has also given an account of the same.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any *two* of the following :—

20

A

جد سعی کردن است در تحصیل مطالب - و جهد رنج بردن  
است در اکتساب مقاصد - جد و جهد از اخلاق ملوک جهانگیر  
و سلاطین کشور ستانست - و این صفت تابع همت بلند  
است - هر چند همت عالی تر بود - جد و جهد در طلب  
مقصود بیشتر واقع می شود - و مرد باید که همت بلند دارد -  
و از تعمل مشقت نترسد - چه حال از در بیرون نیست -  
اگر بجهد دامن مقصود بدست آید فخر المراد - و اگر در حجاب  
توقف بماند عذر او به نزدیک عقلا واضح است - و علو همت  
او در طلب مفاخر و مائثر بر همه ضایر هویدا و لایم \* \* بیست \*

در طلب می کوشم از یابم زهی بخت بلند

در نیابم عذر من افتد بزرگانرا پسند

## B

اما چون از تاب آفتاب عالمتات عرصه زمین و ساحت زمان  
 روشنائی گرفت - بازنده بار دیگر به پرواز در آمد متدرد که  
 بسوی خانه باز گردد - یا چون عزیمتی نموده فی الجمله  
 در سه روزی در اطراف عالم طوف نماید - در اثنای این حال  
 شاهین تیز بال سخت چنگال قصد بازنده کرد - آن  
 مسکین را چون نظر بر شاهین بی رحم افتاد دلش طپیدن  
 گرفت - و هر قوتی و حرکتی که در اعضا و اجزای او بود  
 روی بهعکس عدم آورد - بازنده چون خود را بسته بند بلا دید  
 از نصیحت یار وفادار بر اندیشید و بر فکر ناتمام و خیال  
 نامرجه خود وقوفی تمام یافت \* \* مصرع \*

نذر ها کرد و عهدها به نمود

## C

چون سبکتگین ازین دار فانی رحلت کرد سلطان محمود  
 در سن رشاد بود - و در امور ریاست لشکر و سیاست کشور مجرب  
 و آزموده - حب نام و اعلائی اعلام مذهب که از آران صبی رجعت همت  
 او بود - در زمان حیات سبکتگین بملاحظات چند ظهوری چندان  
 نداشت - پس از سبکتگین چون ممانعتی نماند چنان بروز  
 کرد که باعث تعجب عالمیان گردید - نام او اطراف آفاق دائر  
 و رعب او در قلوب وضع و شریف ساری و سایر گشت \*

2. Answer in Persian any two of the following :—

12.

- (a) Give an account of **مانی نقاش** as set forth in your text book
- (b) Narrate briefly the history of **Bharām Gūr** (بهرام گور).
- (c) Discuss whether **Sulṭān Maḥmūd** was stingy.
- (d) Give a brief account of the life of the author of **انوار سهیلی**.

3. Form sentences with the following :—

8.

بر آمد - درون آمد - فرود آمد - فرومایه - سبکسار - ابن  
 السبیل - از هم فر ریخت - روی نهاد \*



## 4. Translate into English :—

A

15

ایکه بر مائده یورپ مهمان باشی  
 حیف باشد گر از جمله ایشان باشی  
 حیف اگر از اثر فلسفه مغربیان  
 منکر فلسفه سنت و قرآن باشی  
 سحر از شعبده جلوه دهد سر بنهی  
 منکر معجزه موسی عمران باشی  
 گفته سولن و آئین جهانبانی ار  
 بر زبان داری و بیگانه نعمان باشی  
 از هندیبال صد افسانه و داستان گوئی  
 غافل از معرکهای شه مردان باشی  
 قیصران را همه یک یک بشماری ز آغاز  
 بی خبر از عمر و حیدر و عثمان باشی

B

20

آورده اند که روزی یکی از امرا پیش پادشاهی ایستاده بود  
 و شاه بار و مهمی مشاورت می فرمود - قضا را کژدمی در پیراهن  
 از افتاده بود و هر ساعت امیر را می گزید و به نیش زهر آلود  
 خود ضرر می رسانید تا وقتی که نیش وی از کار بیفتاد و هر  
 زهریکه داشت بگاز برد - و آن امیر مطلقاً در آن مشاورت قطع  
 سخن نکرد و تغیری درو ظاهر نشد - و سخنش از قانون عقل  
 و قاعده حکمت انحراف نیافت - تا بخانه آمد و آن کژدم را  
 از جامه بیرون کرد - این خبر پادشاه رسید و متعیر گشت -  
 روزی دیگر که امیر بملازمت آمد سلطان فرمود که دفع ضرر  
 از نفس واجب است تو چرا دیروز آزار عقرب را از خود مندرج  
 نساختی - جواب داد که من آن نیسم که شرف مکالمه چون تو  
 پادشاهی را بسبب الم زهر کژدمی قطع کنم و اگر امروز در مجلس

بزم بر نیش کزدمی صبر نتوانم کرد فردا در معركة رزم به نیغ  
 زهر آب داد؛ دشمن چگونه صبر توانم کرد \*

5. Translate into Persian :—

(a) While we were eating and drinking, the island suddenly trembled and we felt a severe shock. They who were in the ship perceived the earthquake in the island and immediately called to us to re-embark as soon as possible or we should all perish, for what we supposed to be an island was no more than the back of a large fish. The most active jumped into the boat whilst others threw themselves into the water to swim to the ship; as for me I was still on the island when it plunged into the sea and I had only time to seize hold of a piece of wood which had been brought to make a fire with. 18

(b) Alptagīn commenced life as a mamlūk and by his merits attained a high position in the service of his sovereign. Incurring the displeasure of the preceding prince, Alptagīn escaped from Bukhārā and established himself in the mountainous regions of Afghānistān. 7

## LATIN

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate :—

29

(a) O navis, referent in mare te novi  
 fluctus. o quid agis ! fortiter occupa  
 portum. nonne vides, ut  
 nudum remigio latus  
 et malus celeri saucius Afr co  
 antemnaeque gemant, ac sine funibus  
 vix durare carinae  
 possint imperiosius  
 aequor ? non tibi sunt integra lintea,  
 non di, quos iterum pressa voces malo.  
 quamvis Pontica pinus,  
 silvae filia nobilis,  
 iactes et genus et nomen inutile :  
 nil pictis timidus navita puppibus  
 fidit. tu, nisi ventis  
 debes luctubrium, cave.

(b) Persicos odi, puer, apparatus,  
 displicent nexae philyra coronae ;  
 mitte sectari, rosa quo locorum  
 sera moretur.

simplici myrto nihil adlabores  
sedulus, cura : neque te ministrum  
dedecet myrtus neque me sub arta  
vite bibentem.

- (c) Otium divos rogat in patenti  
prensus Aegaeo, simul atra nubes  
condidit lunam neque certa fulgent  
sidera nautis :  
otium bello furiosa Thrace,  
otium Medi pharetra decori,  
Grospho, non gemmis neque purpura ve-  
nale neque auro.
- (d) Fas pervicaces est mihi Thyiadas  
vinique fontem lactis et uberes  
cantare rivos atque truncis  
lapsa cavis iterare mella ;  
fas et beatæ coniugis additum  
stellis honorem tectaque Penthei  
disiecta non leni ruina  
Thracis et exitium Lycurgi.

2. Write short notes on the references in :—

10

- (a) Sic fratres Helenæ, lucida sidera.  
(b) Expertus vacuum Daedalus æra  
pinnis non homini datis.  
(c) Nil desperandum Teucro duce et auspice Teucro.  
(d) O diva gratum quæce regis Antium.  
(e) Cui laurus æternos honores  
Dalmatico peperit triumpho.  
(f) Quin et Prometheus et Pelopis parens  
dulci laborum decipitur sono.  
(g) Te vidit insons Cerberus aureo  
cornu decorum.

3. What in your opinion are the chief characteristics of the first two books of Horace's *Odes* ?

10

4. Translate :—

20

(a) Nunc iam aperte rem publicam universam petis : templa deorum immortalum, tecta urbis, vitam omnium civium, Italiam denique totam ad exitium et vastitatem vocas. quare quoniam id, quod est primum et quod huius imperii disciplinæque maiorum proprium est, facere nondum audeo, faciam id quod est ad severitatem lenius et ad communem salutem utilius. nam si te interfici iussero residuebit in re publica reliqua coniuratorum manus. sin tu, quod te iam dudum hortor, exieris, exhauriatur ex urbe tuorum comitum magna et perniciose sentina rei publicæ.

(b) Sunt homines ex iis coloniis quas Sulla constituit, quas ego universas civium esse optimorum et fortissimorum virorum sentio : sed tamen ii sunt coloni, qui se in insperatis repentinisque pecuniis sumptuosius insolentiusque iactarunt. hi dum aedificant tanque beati, dum prædiis, lecticis familiis magnis, conviviis apparatus delectantur, in tantum æs alienum inciderunt, ut, si salvi esse velint, Sulla sit his ab inferis excitandus ; qui etiam nonnullos agrestes homines tenues atque agentes in eandem illam spem rapinarum veterum impulerunt. quos ego utrosque, Quirites, in eodem genere prædatorum directorumque pono : sed eos hoc moneo : desinant furere ac proscriptiones et dictaturas cogitare.

5. Write explanatory notes on *six* only of the following :—

10

*Manliana castra, Forum Aurelium, eum evocatore servorum et civium perditorum, leges quæ de civium Romanorum supplicio rogatae sunt, praetor*

*urbanus, auspicia, Aurelia via, tabulae novae, vectigal, decrevit quondam senatus ut L. Opimius consul videret ne quid res publica detrimenti caperet.*

6. How far can Cicero be accepted as a reliable authority for the aims and character of Catiline? What part was played in the events of this year by the Allobroges, Quintus Curius, Cethegus, Sempronius? 10

7. Give the perfect participle (nom. sing. masc. only) of :— 6

*duco, augeo, audeo, odi, terreo, fero, sequor, frango, fleo, decerno, defungor.*

8. Explain and give examples of—accusative and infinitive, ablative of quality, indirect question, partitive genitive. 6

How are *quominus* and *quin* used? Give examples of adverbs ending in *tus, tim, am, secus*.

9. Translate into English :—*ubi terrarum. ne hoc feceris, utendum est aetate, quam ob rem, constat inter omnes* 8

Translate into Latin :—he was the first to come, he saw to it that they were killed, as far as the river, while the battle was raging, a man worthy of great praise, at dawn

## SECOND PAPER

*(Candidates are required to give their answers in their own words as far as practicable)*

*The figures in the margin indicate full marks*

1. Translate into Latin :— 40

Belisarius entered the city after the departure of the Goths : and he found it deserted. he had the greatest difficulty in putting it in a state of defence. But though Belisarius was enabled, by his military skill, to defend Rome against the attacks of Totila, he was unable to make any headway against the Gothic army in the open field : and after vainly endeavouring to bring back victory to the Roman standards in Italy, he received permission to resign the command and return to Constantinople.

2. Translate into English :— 60

(a) Dum haec Veis agebantur, interim arx Romae Capitoliumque in ingenti periculo fuit. Namque Galli, seu vestigio totius humano, qua nuntius a Veis pervenerat, seu sua sponte animadverso ad Carmentis saxo ascensu aequae, nocte sublustri, cum primo inermem, qui temptaret viam, praemisissent, tradentes inde arma, ubi quid iniqui esset, alterni innixi sublevantesque in vicem et trahentes alii alios, prout postularet locus, tanto silentio in summum evasere, ut non custodes solum fallerent, sed ne canes quidem, sollicitum animal ad nocturnos strepitus, excitarent. Anseres non fefellere, quibus sacra Iunonis in summa inopia cibi tamen abstinebatur. Quae res saluti fuit,

(b) Defectus annis et desertus viribus  
Leo cum iaceret spiritum extremum trahens,  
Aper fulmineis ad eum venit dentibus,  
Et vindicavit ictu veterem injuriam  
Infestis taurus mox confodit cornibus  
Hostile corpus. Asinus ut videt ferum  
Impune laedi, calcibus frontem extudit.  
At ille exspirans : 'Fortes indigne tuli  
Mibi insultare : te, naturae reddecus,  
Quod ferre morte cogor, bis videor mori.'

## FRENCH

Paper-Settlers & Examiners—{REV. FATHER E. POPULAIRE, S. J.  
MR. NAGENDRANATH CHANDRA, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any three of the following passages :—

25

(a) Je suis votre valet et tu ne connais pas encore le seigneur Harpagon. Le seigneur Harpagon est de tous les humains l'humain le moins humain, le mortel de tous les mortels le plus dur et le plus serré. Il n'est point de service qui pousse sa reconnaissance jusqu'à lui faire ouvrir les mains. De la louange, de l'estime, de la bienveillance en paroles, et de l'amitié tant qu'il vous plaira; mais de l'argent, point d'affaires. Il n'est rien de plus sec et de plus aride que ses bonnes grâces et ses caresses.

(b) Le père était parti depuis une heure et demie. Il avait atteint la ville maintenant. Elle croyait le voir. Il racontait la chose à M. Luvigne, qui pâissait d'émotion et sonnait sa bonne pour avoir son uniforme et ses armes. Elle entendait, lui semblait-il, le tambour courant par les rues. Les têtes affairées apparaissaient aux fenêtres. Les soldats citoyens sortaient de leurs maisons, à peine vêtus, essouffés, bondant leurs ceinturons, et se portaient au pas gymnastique vers la maison du commandant.

(c) — Mon Dieu, c'est un malheur dont je fus tout le temps la première victime, et dont ma volonté n'est pour rien. Les faits se commentent d'eux-mêmes, m'sieu le président. Je suis un honnête homme de travail, tapissier dans la même rue depuis seize ans, connu, aimé, respecté, considéré de tous, comme en ont attesté les voisins, même la concierge, qui n'est pas folâtre tous les jours. J'aime le travail, j'aime l'épargne, j'aime les honnêtes gens et les plaisirs honnêtes. Voilà ce qui m'a perdu, tant pis pour moi : ma volonté n'y étant pas, je continue à me respecter.

(d) Bref, ma femme me réveille à 6 heures. Je saute du lit, j passe vite et vite ma culotte et ma vareuse : un coup d'eau sur le museau, et nous sautons dans Dalila. Trop tard. Quand j'arrive à mon trou, il était pris ! jamais ça n'était arrivé, m'sieu le président, jamais depuis trois ans ! Ça m'a fait un effet comme si on me dévalisait sous mes yeux. Je dis : 'Nom d'un nom, d'un nom d'un nom !' Et voilà ma femme qui commence à me harceler. 'Hein, ton casque à mèche ! Va donc, sot ! Es-tu content, grande bête ?'

2. Write notes on :—*grande armée, casque à mèche, Grasse, Yvetot et Pont-à-Mousson.* 10

3. Narrate in brief the story in Molière's *L'Avare*. 15

4. Give the comparative and superlative forms of *bien*, and *mal, peu* 4

5. Give the principal rules for the formation of the plural of compound nouns. Give examples. 6

6. Give the feminine forms of—*gendre, oncle, garçon, vieux, sot*. 4

7. Conjugate the past indefinite (indicative mood) of—(a) *devoir*, 6  
(b) *mourir*, (c) *s'en aller*.

8. Translate into French :—

30

Henry finds that time passes quickly at Paris. He feels that his progress in French is advancing daily. He speaks French all day, and

is not sorry that he has come to Paris, specially now that he has met such a nice family. Everybody tries to give him as much pleasure as possible. They are starting for Versailles to-day. Versailles is not far from Paris, it is only thirty-five minutes by rail. Henry has got up early, and is waiting for Jean in the dining-room. At last he is coming down, the lazy fellow. Breakfast is served. They breakfast hurriedly lest they should be late. Jean's father and mother have already gone to the station.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English *one* of the following :—

30

- (a) Rappelle-toi, quand l'Aurore craintive  
Ouvre au soleil son palais enchanté ;  
Rappelle-toi, lorsque la nuit pensive  
Passe en rêvant sous son voile argenté ;  
A l'appel du plaisir lorsque ton sein palpite,  
Aux doux songes du soir lorsque l'ombre t'invite,  
Ecoute au fond des bois  
Murmurer une voix :  
Rappelle-toi.  
Rappelle-toi lorsque les destinées  
M'auront de toi pour jamais séparé.  
Quand le chagrin, l'exil et les années  
Auront flétri ce cœur désespéré :  
Songe à mon triste amour, songe à l'adieu suprême !  
L'absence ni le temps ne sent rien quand on s'aime ;  
Tant que mon cœur battra  
Toujours il te dira :  
Rappelle-toi.  
Rappelle-toi, quand sous la froide terre  
Mon cœur brisé pour toujours dormira ;  
Rappelle-toi, quand la fleur solitaire  
Sur mon tombeau doucement s'ouvrira.  
Tu ne me verras plus, mais mon âme immortelle  
Reviendra près de toi comme une sœur fidèle.  
Ecoute, dans la nuit,  
Une voix qui gémit :  
Rappelle-toi.
- (b) Midi, roi des étés, épandu sur la plaine,  
Tombe en nappes d'argent des hauteurs du ciel bleu.  
Tout se tait. L'air flamboie et brûle sans haleine ;  
La terre est assoupie en sa robe de feu.  
L'étendue est immense et les champs n'ont point  
d'ombre,  
Et la source est tarie où buvaient les troupeaux ;  
La lointaine forêt, dont la lisière est sombre,  
Dort là-bas, immobile, en un pesant repos.  
Seuls, les grands blés mûris, tels qu'une mère dorée,  
Se déroulent au loin, dédaigneux du sommeil ;  
Pacifiques enfants de la terre sacrée,

Ils épuisent sans peur la coupe du soleil.  
 Parfois comme un soupir de leur âme brûlante,  
 Du sein des épis lourds qui murmurent entre eux,  
 Une ondulation majestueuse et lente  
 S'éveille, et va mourir à l'horizon poudreux.

2. Translate into English *one of the following* :—

30

(a) Lorsqu'au milieu de tous ces exercices, le jeune gentilhomme avait atteint vingt et un ans, arrivait le moment de le faire chevalier. Les veilles d'armes dans l'église duraient plusieurs nuits. L'aspirant à la chevalerie était amené à l'autel par son père et sa mère, ou par ses parrains, qui portaient des cierges. Le prêtre, après avoir célébré la messe, prenait sur l'autel même l'épée et le baudrier, et en ceignait le jeune chevalier. Une foule de cérémonies symboliques avaient précédé : c'étaient le bain, les vêtements de lin blanc, la confession, souvent à haute voix, la communion, le serment, qui exprimait tous les sacrifices et toutes les vertus imposés au chevalier. Enfin, on amenait un cheval de bataille à la porte de la chapelle ; le jeune initié, bondissant de joie, s'élançait tout armé sur ce cheval, le faisait vivement caracoler, et tout le monde reconnaissait un bon Chrétien et un excellent chevalier.

(b) Le duc de Bourgogne, Charles le Téméraire, faisant la guerre à Louis XI, roi de France, vint attaquer Beauvais. Il croyait emporter facilement cette ville et marcher ensuite sur Paris : les habitants se défendirent avec courage ; mais ils étaient trop peu nombreux pour pouvoir résister longtemps. Les femmes, transportées d'une émulation magnanime, voulurent partager avec leurs pères et leurs époux les fatigues de la lutte et la gloire de sauver la ville. Sous la conduite d'une héroïne, appelée Jeanne Hachette, elles volent sur les remparts, à un endroit dépourvu de défenseurs : elles renversent les échelles, elles précipitent les assaillants dans les fossés ; Jeanne Hachette, à leur tête, arrache un étendard des mains de l'ennemi. L'exemple des femmes redouble le courage des hommes ; en vain Charles le Téméraire multiplie les assauts, en vain son artillerie foudroie jour et nuit la place, il est obligé de lever le siège, après avoir perdu une grande partie de son armée.

3. Translate into French :—

20

- (a) It was nearly nine o'clock and it was raining.
- (b) The children were therefore obliged to stay at home.
- (c) But they had many things to amuse them.
- (d) Their grandmothers had some new games to show them.
- (e) In the evening they were to see their cousin from London.
- (f) Please look for the books ; I have lost them.
- (g) Some one called me in a loud voice.
- (h) What time was it ? Half-past five.
- (i) He fell and broke his leg.
- (j) The train from London is almost always late.

4. Translate into French :—

20

There was once a prince who was to marry a maiden whom he greatly loved. One day, as he was sitting with her, news was brought to him that his father was very ill and wished to see him before his end. Then he left the maiden but gave her first a ring, saying : ' When I am king I will come back to you and marry you.' He asked her always to wear the gold ring on her left hand, and bade her farewell. The maiden was very sad at his departure. She wept, for she thought that he would forget her soon, and would never return.

## BENGALI (FOR FEMALE CANDIDATES)

*Paper-Setters*—{ Mr. S. P. MOOKERJEE, M.A., B.L., BARRISTER-  
AT-LAW.  
,, MANMATHAMOHAN BOSE, M.A.

*Examiner*—MRS. TATINI DAS, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

Translate into English any two of the following :—

20

- (a) আমি চেয়ে আছি তোমাদের সবাপানে ।  
স্থান দাও মোরে সকলের মাঝখানে ।  
নীচে সব নীচে এ ধুলির ধরণীতে  
যেথা আসনের মূল্য না হয় দিতে,  
যেথা রেখা দিয়ে ভাগ করা নেই কিছু,  
যেথা ভেদ নাই মানে আর অপমানে,  
স্থান দাও সেথা সকলের মাঝখানে ।
- (b) নরকুলোত্তম তুমি, রঘুকুলমণি ;  
বিদ্যা, বুদ্ধি, বাহুবলে অতুল জগতে !  
উচিত এ কার্য্য তব, শুন মহামতি !  
অনুচিত কৰ্ম্ম কভু করে কি সৃজনে ?  
যথা রক্ষোদলপতি নৈকষের বলী ;  
নরদলপতি তুমি, রাঘব ! কুক্ষণে—  
ক্ষম এ আক্ষেপ, রথি, মিনতি ও পদে ।—  
কুক্ষণে ভেটিল দৌহা দৌহে রিপু ভাবে ।
- (c) শ্রীরামের বচনে সীতার ওষ্ঠ কাঁপে,  
কহেন রামের প্রতি কুপিত সন্তাপে ।  
পাণ্ডিত হইয়া বল নিরোধের প্রায়,  
কেন হেন জনে পিতা দিলেন আশ্রয় ।  
নিজ নারী রাখিতে যে করে ভয় মনে,  
দেখ, তারে বীর বলে কোন বীর জনে ?  
তব সঙ্গে বেড়াইতে কুশ কাটা ফুটে  
তৃণ হেন বাসি তুমি থাকিলে নিকটে ।  
তব সঙ্গে থাকি যদি পাই তরুণুল,  
অন্ত স্বর্গ গৃহ নহে তার সমতুল ।



2. Explain with reference to the context any two of the following :— 1

(a) সীমার মাঝে, অসীম ভূমি  
 বাজাও আপন হুর।  
 আমার মধ্যে তোমার প্রকাশ  
 তাই এতো মধুর।  
 কতো বর্ণে, কতো গন্ধে,  
 কতো গানে, কতো ছন্দে,  
 অরূপ, তোমার রূপের লীলায়  
 জাগে হৃদয়পুর।  
 আমার মধ্যে তোমার শোভা  
 এমন সুমধুর।

(b) জান ভগবান  
 এক, অদ্বিতীয়, সত্য ; বিশ্ব বীজাধার ;  
 অখণ্ড সচ্চিদানন্দ ; অব্যক্ত মহান।  
 সচ্চিদানন্দের মহা আনন্দ উজ্জ্বল  
 ছুটে মহা বিবর্তন প্রবাহ যখন—  
 অব্যক্তি মহাব্যক্তি, আলোক বিকাশ  
 বিদ্রোহের,—হয় ব্যক্ত বিশ্বের কারণ।

(c) কি কব লজ্জার কথা। ধরিয়া আমারে  
 নরপুত্র হুঃশাসন রাজ সভাতলে  
 লইল যখন হায় ! করিতে কিস্করী  
 পাশবদ্ধা সিংহীসমা ! রৌষরাশি মম  
 নীরবে মরমতলে লাগিল জলিতে,  
 যেমতি বাড়বানল নীলাম্বুধি-বুকে  
 নীরবে হৃদয় দহে অসহ্য দহনে।  
 তদবধি আছি আমি সেই মুক্ত কেশে,  
 উদাসিনী সন্ন্যাসিনী ! যেদিন আমারে  
 হুঃশাসন-তপ্ত-লোহে করাইবে দ্বান  
 মহাবাহু ভীমসেন, সেদিন বাঁধিব  
 এ কেশ-কবরী পুনঃ মনের হরষে।

3. Describe one of the following events, as narrated in your text :— 14

- (a) The last fight of abhimanyu.  
 (b) The death of Srikrishna.  
 (c) The funeral of Meghnad.

4. (a) Distinguish between তদ্ধিত suffix and কৃৎ suffix, giving 4 examples.

(b) Point out the suffixes in any *six* of the following words, and state what each suffix signifies :— 6

জুয়ারি, গলাসই, মানানসই,  
কাঠুরে, বাসাড়ে, জালানি, ইঁপানি।

(c) Explain and illustrate the meaning of বাচা. 3

(d) Expound the *samāsas* in any *four* of the following words :— 6

গাছপাকা, চন্দ্রপুলি, ফুলঝুরি, একগুয়ে,  
বেমানান, অকুতোভয়, জীবন্মৃত।

(e) Substitute single words for any *six* of the following :— 6

অল্প বিষয়ে মন নাই যাহার ; বিদেশগত ভর্তা যাহার ; মুক্তির ইচ্ছা করে যে ; সমকালে এক অধ্যাপকের ছাত্র যে ; মৃত্যু আসন্ন যাহার ; শুনিতে ইচ্ছা করে যে ; নদী যাত্রা যাহার (যে দেশের)।

5. Translate into Bengali any *two* of the following passages :— 25

(a) When Julius Caesar was in his thirty-third year he sat one evening reading the life of Alexander the Great. He was deeply impressed by the story of his achievements and, after a time, began to muse pensively and tears dropped from his eyes. 'What is wrong?' asked one of his friends. 'I have good cause to be concerned,' said Julius Caesar, 'at my age Alexander reigned over many conquered countries and I have not yet a single great achievement to my credit.'

(b) On another occasion Caesar was journeying in the vicinity of the Alps and reached a very small town. One of his friends who had accompanied him from the great city of Rome, chanced to remark, 'Can there be any rivalries here, any struggles to be chief man, or any jealousy or ambition as we see among the great at Rome?' Caesar glanced round about and then said, 'I assure you, my friend, that I should rather be the first man here than the second man in Rome.'

(c) These two anecdotes shed a vivid light on the character of Julius Caesar. He was a proud and ambitious man, who loved power and desired to be a leader of highest rank. He had great ability both as a statesman and as a general, and he achieved his dream of becoming a famous conqueror and the first man in Rome. Had his life not been suddenly cut short by the daggers of assassins, he might well have rivalled the fame of Alexander the Great.

## SECOND PAPER (PROSE TEXTS)

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate *either* of the following passages into English :— 10

(a) চোর চুরি করিতে গিয়া হঠাৎ বিবেকের তাড়নায় যেমন জড়সড় হয়, সে তেমনি ভাবে তৎক্ষণাৎ বারট্টা বন্ধ করিয়া ফেলিল

এবং তারপর জিনিসটা যথাস্থানে রাখিয়া একবার চারিদিক চাহিয়াই তাড়াতাড়ি বাহির হইয়া গেল। আশায়, আনন্দে, লজ্জায় তাহার বুক কাঁপিতেছিল। গহনাটার দিকে চোখ তুলিয়া সে চাহিয়াও দেখে নাই। কিন্তু ওই যে সোনার জলে ছাপা কয়টি অক্ষর, উহার মূল্য যেন তার নিকট সাত রাজার ধনের তায় অতুল্য।

(b) অবশেষে সঙ্কোচ সরাইয়া রমাবল্লভ কহিলেন, “তোমায় কেন ডাকিয়াছি শুনিবে? আমার সর্বস্ব আজ তোমার উপর নির্ভর করিতেছে।” অম্বর পূর্ণ অবিশ্বাসে তাঁহার মুখের দিকে চাহিল। রমাবল্লভ তাহা বুঝিলেন, বলিলেন, “তুমি বিশ্বাস করিতে পারিতেছ না, সহসা কেই বা এ কথা বিশ্বাস করিবে? কিন্তু এ কথা সম্পূর্ণ সত্য যে তোমার দয়ার উপর আজ আমার মান-সম্মত নির্ভর করিতেছে। বাধা দিও না, সবই বলিতেছি। আগে তুমি বল, এখন কি করিতেছ, ভবিষ্যৎ সম্বন্ধে কি ভাবিয়াছ?”

2. Explain the following with reference to the context :—

8

বিশ্বনাথ বিশ্ব জুড়িয়া আছেন, ক্ষুদ্র মানব জীবনে তাঁহার প্রতিমূর্তি পিতায়, মাতায়, স্বামীতে, আমায় শতভাবে প্রকটিত। জগতে এই সম্বন্ধ যতই বিস্তৃত করা যায়, মনের ততই প্রসার হয়। লোকের বিশ্বাস, আসক্তি-হীন হইলে প্রকৃত জ্ঞানী হইয়া যায়। কথা ঠিকই, কিন্তু সেই আসক্তি-হীন হওয়ার উপায় প্রেমহীনতা নয়, প্রণয়ের অতি প্রসার।

3. Either, Discuss briefly the merits of বৃহৎসংহার as an epic :

12

Or, Give a critical estimate of the character of বাণী।

4. (a) Make nouns from the following adjectives :—নত; বৃদ্ধিমান; লোহিত; উৎকৃষ্ট; and adjectives from the following nouns :—প্রবাস; গন্ধ; গ্রহান; অনুবাদ।

8

(b) Rewrite the following, correcting all errors :—

7

শামানন্দ্রির সরগ্রভীর পিত্রীশশা। সে একে বৃদ্ধি, তায় বাতগ্রস্তা। তার উপর সেদিন আমাবস্থা। যন্ত্রনানলে সে হাবুদুবু খাইতে লাগিল। কাছে কেউ নেই যে স্তম্ভসা করে বা এক কোঁটা জল দিয়া সাহায্য করে।

5. Translate into English any two of the following passages :—

30

(a) পূর্বে শতকরা নব্বই জন লোক গ্রামে বাস করিত এবং চাষাবাস করিয়া খাইত। সাধারণতঃ তাহারা গ্রাম ছাড়িয়া কোথাও যাইত না, বাহিরে কোথায় কি হইতেছে তাহার সংবাদ রাখাও প্রয়োজন বোধ করিত না। দৈনন্দিন জীবন-যাত্রা নির্বাহ করিবার জন্য তাহারা বাহির হইতে অতি অল্প দ্রব্য আমদানী করিত। পঞ্চাশটি বানের অভাবে দূর হইতে কোন দ্রব্য আনা বিশেষ ব্যয়সাধ্য

ছিল। সুতরাং তাহাদের মধ্যে কোনরূপ বিলাসিতা প্রবেশ করিতে পারে নাই।

(b) গ্রামে উৎপন্ন সামগ্রী তাহাদের সকল অভাব পূর্ণ করিত। সাধারণ লোকের বেশভূষা অতি সামান্য ছিল, স্থলভ অথচ পুষ্টিকর আহারে তাহারা পরিতৃপ্ত হইত। গ্রামের শিল্পীরা সাধারণতঃ কেবল গ্রামের প্রয়োজনমত জিনিসপত্র তৈয়ারী করিত এবং তাহার মূল্য স্বরূপ ফসলের অংশ পাইত। সহরের শিল্পীরা প্রধানতঃ ধনীর বিলাসের দ্রব্য প্রস্তুত করিতে নিযুক্ত থাকিত। মজুরেরা গ্রামের মধ্যে যে কাজ মিলিত তাহাই করিত, কারণ বড় বড় কল কারখানা, চা-বাগান প্রভৃতির তখনও সৃষ্টি হয় নাই।

(c) হঠাৎ একটা গোলমাল শুনিয়া পিছনে ফিরিয়া যাহা দেখিলাম তাহা আজও স্পষ্ট মনে আছে। ঘোড়ার গাড়ীর ভাড়া লইয়া বচসা বাধিয়াছে। হিন্দুস্থানী গাড়োয়ান। সে কহিতেছে, চুক্তি হইয়াছিল আট আনা; আর তিনজন রমনী গাড়ী হইতে নামিয়া সমস্বরে চীৎকার করিয়া বলিতেছেন, না, পাঁচ আনা। খানিকক্ষণ তর্কাতর্কির পর গাড়োয়ান স্ত্রীলোকগণকে অপমানসূচক কথা বলায় তাহারা তাহাকে আক্রমণ করিলেন।

6. 'Translate any one of the following passages into Bengali :—

25

(a) Caesar was born in 100 B.C. and died in 44 B.C. in his fifty-sixth year. He lost his father when only sixteen. He owed much of his early successes to his mother, to whom he was deeply devoted. As a youth, he was a lover of literature, and wrote verse of merit much above the average. He was tall, slim and good-looking with a fair complexion and sharp dark eyes. He liked to dress well and he had many friends and admirers. When he learned to speak in public, he was very fluent. He spoke with warmth and vigour in a somewhat high voice, and gave his hearers the impression that he was very much in earnest.

(b) Caesar was not afraid of the blood-thirsty pirates. Indeed, he treated them with contempt. The pirates were not accustomed to prisoners of this type. When they found they could not scare him, they became greatly amused. He took part in games with them and ordered them about as if he were their chief. If he wanted to sleep and the pirates chanced to be making a noise, singing or laughing over their wine, he sent a servant to command them to be silent. Sometimes during his captivity he wrote poems and speeches and he ordered the pirates to listen to his recitals of them.

## HINDI (FOR FEMALE CANDIDATES)

*Paper-Setters*—{MR. NALINIMOHAN SANYAL  
LALA SITARAM, B.A.

*Examiner*—MR. AMBIKA BAJPAI

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. To what special class of Rajputs do the Hārās (हारा) belong? 8  
Do you know any other sub-divisions of the same class? What other state  
in Rajputana is governed by Hārās?

2. Explain in Hindi any two of the following three passages :— 12

- (a) जग प्रभुता अरु एक छत्र तव राज बिराजत ।  
नव बय तन छत्रि चारु देखि रतिनायक लाजत ॥  
यह सब अति लघु बात लागि तुम नासन ठानत ।  
याते' तुमहि बिचार-मूढ़ मैं मन अनुमानत ॥
- (b) नमो देव होतार बसीठी पुरोहित सुतदाई ।  
नमो तनूनपात देवन को लावन हार सदाई ॥  
नमो धरमरच्छ सबही को पावन करन महाना ।  
नमो' भविष्य विषय को ज्ञाता मानुष जन को प्राना ॥
- (c) यों नभ पंचम अंस तासु दूनों बस मैं करि ।  
निज बल पूरन पेखि लालिमा चित साहस धरि ॥  
बढिके पंचम अंस और तुरता सो' लोन्हो ।  
तहां जाय फिरि चालु मन्द पहिले सम कीन्हो ॥

3. Write out in Hindi an account of the birth of Chauhāns as described in your book. 10

4. Translate into English any one of the following two passages :— 12

- (a) भूप जसी तप-कानन छोर सो',  
रानि बिदा करि कै करुनाकर ।  
नन्दिनि कामदुहा तनुजा-युत,  
चारिहु सिन्धु से चारि पयोधर ॥  
मेदिनि सी जो लसै अति पावन,  
रच्छन तासु कियो सबही विधि ।  
राजस नीति विचारि मनो,  
अतहु महँ भूप न तासु तजी सिधि ॥

- (6) बीरन बीर बढ़ावत है रन को उतसाह भरे मुद भारी ।  
चाहत है रन मण्डल को उड़िजान मनो खग की गति धारी ॥  
भाषत एक मलिच्छन को दल देखत हाइन को भगि जैहै ।  
सेन पताकन को लखतै बह धीरज छांड़ि पछारन खैहै ।

5. Explain the phrases :—

8

बाराद्वार, निरदन्द, दृच्छिन्यरूढ़, पड़ज, अथरबजातार, निछत्र,  
मनोजवा, गार्हपत्य ।

6. How are diminutives formed in Hindi? Give some instances of  
apparent diminutives, i.e. whose meanings are different from those of the  
corresponding masculine forms. 15

7. Give the rule for the formation of adjectives from verbs in Hindi.  
Do you know any instances of verbs used as adjectives? 10

8. Translate into English :—

25

दलपति शाह का विवाह महोबे के चन्देल राजा की रूपवती कन्या  
दुर्गावती के साथ हुआ था । दुर्गावती ने अपना सौभाग्य चार ही बरस  
भोग पाया था कि दलपति शाह चल बसा । रानी दुर्गावती ने अपने  
नाबालिग पुत्र वीर नारायण की ओर से राज्य की बागडोर अपने हाथ में  
ली और १५ बरस तक बड़ी योग्यता से शासन किया । उसके शासन में  
प्रजा की उन्नति देखकर कड़े मानिकपूर के नवाब का जी ललचाया । कहते  
हैं कि अकबर बादशाह ने एक सोने का चर्खा दुर्गावती के पास इस अर्थ से  
भेजा था कि स्त्रियों का काम चर्खा कातने का है राज करने का नहीं ।  
इसके उत्तर में रानी ने एक सोने का धनुहा बनवाकर भिजवा दिया मानो  
यह कहला भेजा कि तुम्हारा भी काम रूई धुन्ने का है ।

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any three of the following passages, and give  
the context in each case :—

(a) इस मिठाई को न पुरानी होने का भय है न चींटी का डर है । 12  
सुनने पढ़ने की बात है, पर गूंगे का गुड़ है । निर्जन में, जंगल पहाड़ में,  
भी गीतगोविन्द सब आनंद सामग्री देता है । जहां गीतगोविन्द है वहीं  
बेष्णव गोष्ठी है, वहीं रसिक समाज है, वहीं वृन्दावन है, वहीं प्रेमसरोवर  
है, वहीं भाव समुद्र है, वहीं गोखोक है, और वहीं प्रत्यक्ष ब्रह्मानन्द है ।

(b) ये दुष्ट प्राण से प्रतिष्ठा और धर्म को विशेष मानते हैं ; इससे 12  
ऐसा करना चाहिये जिसमें इन दुष्टों का मुख भंग हो, और धर्म और प्रतिष्ठा  
दोनों को हानि पहुँचे । ...यावच्छक्ति उसको दुःख और अनादर दिया जाय ।  
ऐसे नीच के विषय में जितनी निर्दयता की जाय सब थोड़ी है और ऐसे  
समय हमलोगों को कानून छपर पर रखना चाहिये और उसको भरपूर  
दुःख देना चाहिये ।

(c) बुलबुल प्रातः समय यह भाषत, 12  
तू पशु जो हिय प्रेम न राखत ।  
जो सुनि गान ऊँट नाचत अस,  
तू पशु सन घटि जो न तोहि रस ।  
चलै जु बन महुँ वायु झकोरा,  
झुकै डार नहिं सिला कठोरा ।  
करत सबै हरि के गुन गाना,  
समुझनहार सुनत दै काना ।  
बुलबुल ही नहिं फूल पै बैठि करै गुनगान ।  
काँटे काँटे भजन में हरि के बनै जुबान ॥

(d) खोटे लोहे से गढ़े नहिं आछी तरवार, 12  
दुष्ट सीख दीन्हे नहीं करे भले व्यवहार ।  
घन से धरती परत उज्जल निर्मल नीर,  
फूल खिलत है बाग में बन में जमै करीर ।  
ऊसर सम्बुल ना जमै बादि न मारो माथ,  
होत बुराई भजन की, नेकी खल के साथ ।

2. Either, Who was Jayadeva? When and where was he born? 15  
What works did he write? What was the subject of his best work? Characterize his poetry.

Or, Write briefly in Hindi what you have learnt from the *Natabatika* 15  
on the subject of contentment.

3. Reproduce in simple Hindi the sense of one of the following passages :—

(a) काम चांडाल कुत्ते की भँति लोभ की डोरी में हमें बाँधे रहता 10  
है, क्रोध कसाई की भँति घट में निवास करता है तथा अभिमान एक ऐसे  
टीले की रचना कर देता है जिस पर प्रेमरूपी जल ठहरने ही नहीं पाता  
और अन्तर्यामी से ही कपट करने की बान पड़ जाती है ।

(b) साहित्य और कला वह साधन हैं जिनसे सत्य और सौन्दर्य के 10  
भाव जाति के व्यक्तियों के हृदयों को एकता के तागों में पिरोते हैं और उनके  
हृदयों के अन्धकार को दूर करते हैं । इन भावों में एक गर्मी है जी भेदों  
को भस्म करनेवाली है, एक ज्योति है जो अज्ञान के तिमिर का विनाश  
करती है ।

4. Translate the following into Hindi :—

14

Generally speaking, agriculture in India is in the hands of men of small means and with a narrow outlook on life. The Capital they require for the cultivation of the soil is borrowed from the local banker at ruinous rates of interest. The only security the farmer has to give, apart from his crops, is the land itself, which has, under British rule, increased in value considerably. Thus the farmer can borrow much more on this security, and does borrow more than he needs for purposes of farming, wasting the extra money on marriage feasts.

5. (a) Write sentences using *five* of the following expressions :—

5

- |                       |                       |
|-----------------------|-----------------------|
| (i) मन की कली खिलना । | (ii) जी खिँच जाना ।   |
| (iii) गिरे दिन ।      | (iv) मुख मोड़ना ।     |
| (v) दून हाँकना ।      | (vi) डींग मारना ।     |
| (vii) आवभगत ।         | (viii) फूले न समाना । |

(b) Compose sentences to bring out the genders of *five* of the following words :—

5

समाज, चालचलन, गीत, टिकट, रपोट, शरीर, दोपहर, बैठक ।

(c) Comment on the peculiarities of any *five* of the following :—

5

- (i) दुनियाँ में ।
- (ii) वह दिन में कभी नहीं सोता है ।
- (iii) हमारे चारों ओर ।
- (iv) बड़े शरम की बात ।
- (v) देश देश की बोली ।
- (vi) देखते देखते मर गया ।
- (vii) बसन्त ऋतु आयी ।

6. Write a very short essay on *one* of the following subjects :—

10

- (a) The education suitable for Indian girls at present.
- (b) Beggary and almsgiving as found in India—whether able-bodied men ought to beg.
- (c) A sound mind in a sound body—how acquired.



## ASSAMESE ( FOR FEMALE CANDIDATES )

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

I. Translate any two of the following passages into English :—

24

(a) জীৱন সঙ্কীৰ্ত্তন সৃষ্টি বিতোপন,  
 অমৃতৰ বহুধৰা, সুৰলা শাসন,  
 কবিৰ ধাউতি,—ধৰা সৌন্দৰ্য্যৰ ধল  
 তাত যেন ফুলি উঠে প্ৰেম-গতদল ।  
 প্ৰকৃতিত বাজে মহা উদ্দেশ্যৰ সুৰ,  
 তাৰ হস্তে হিয়া মোৰ উতলা আত্মৰ ।  
 বিশ্বৰ সহিতে য'ত ভাবৰ বন্ধন  
 সেয়ে মোৰ জীৱনৰ ধৰ্ম্ম সনাতন,  
 সত্য বি সুন্দৰ যাৰ অনন্ত ঘোৰন  
 তাৰেই বুকুত মই পাতিম কানন ।  
 হৃদয়ৰ বাসনাৰ বসন্ত সমীৰ  
 বীণাৰ মৃদল তন্ত্ৰী কবিৰ অধাৰ ।  
 কবিৰ পুলকধাণী দেৱতাৰ বৰ,  
 আবেগৰ বন্দী কবি নোহে নিয়মৰ ।

(b) অন্তৰত আজি মোৰ বাজে প্ৰতিধ্বনি  
 শত যুগ-যুগান্তৰ প্ৰেমৰ কাহিনী ।  
 কিন্তু এটি কথা শুনি লাগে মোৰ ভয়,—  
 “প্ৰকৃত প্ৰেমৰ পথ নিমজ নহয় ।”  
 প্ৰণয়ৰ সাধনাত অশেষ বিঘিনি,  
 প্ৰতিপদে পৰীক্ষাৰ জ্বলন্ত অগনি,  
 মানৱৰ নিকৰ্ণ নিৰ্ঠৰ শাসন,  
 প্ৰেমিকৰ হিয়া-ভগা শোকৰ কান্দোন ।  
 হৃদয়ৰ হস্তে বোলে জলে হৃদয়ত  
 আবেগৰ সুখছবি যুগল প্ৰাণত,  
 তাৰ পাচে বিচ্ছেদৰ দাক্ষণ যাতনা,  
 চকুপোৰা মানৱৰ নিন্দা-গৰিহণ ।

- (c) জয় জয় নবনাৰায়ণ নৃপসাঁৰ ।  
 যাৰ কীৰ্ত্তি ব্যাপিলেক সমুদ্ৰৰ পাৰ ॥  
 প্ৰজাগণ পালে যেন পুত্ৰস্নেহ আতি ।  
 দৰিদ্ৰ জনক ধন দেস্ত আনি মাতি ॥  
 দুষ্টৰ অন্তক, সন্তসৰক পালন্ত ।  
 যাৰ সম নাহি সন্ত পৰম মহন্ত ॥  
 গুৰুধ্বজ অনুজ যাহাৰ যুবাজ ।  
 পৰম গহন অতি অদভূত কাজ ॥  
 তেঁহে মোক বুলিলন্ত মহাহৰ্ষ মনে ।  
 ভাৰত-পয়াৰ তুমি কৰিয়ো যতনে ॥  
 আমাৰ ঘৰত আছে ভাৰত প্ৰশস্ত ।  
 নিষোক আপোন গৃহে দিলোহোঁ সমস্ত ॥  
 এহি বুলি ৰাজা পাচে বলধি যোবাই ।  
 পঠাইলা পুণ্ডক সৰ আমাসাৰ ঠাই ॥  
 খাইবাৰ সকল দ্ৰব্য দিলন্ত অপাৰ ।  
 দাস-দাসী দিলা নাম কৰাইলা আমাৰ ॥

Explain two of the following passages with reference to context :— 16

- (a) সেই একাৰত উদিল পুত্ৰ লক্ষ তৰা,  
 সেই বিনাশত জন্ম নিলে পুষ্প ধৰা,  
 মুক্তৰিলে চিন্তালতা, নতুন স্বৰ নতুন কথা,  
 বিশ্ব এৰি পৰিল হিমাৰ নতুন সৃষ্টিকণা,—  
 সিদিন তুমি নমাই থলা তোমাৰ ৰুদ্ৰৰাণা ।
- (b) মধুমতী তটিনীয়ে ধৰিলে কোলাত পদ্মাবতী পুৰ,  
 তাৰে একোণত ফুল আছিল নীৰলে মালতী মধুৰ,  
 কোনে সেই মাধুবীত দিলে ছতিয়াই আবেগৰ কণা ?  
 ক'বপৰা হৃদয়ত হ'ল উতপন মিলন-বাসনা ?
- (c) 'ৰা'-শব্দক সিটো উচ্চৰে যেখন ।  
 মুখহস্তে অগ্নি ৰাজ হোৱয় তেখন ।  
 'ম' বুলি মুখ চাপি সামৰিয়া থৈল ।  
 হৃদয়ত গৈয়া বহি গোট ধাম ভৈল ॥
- (d) সত্যশীল মহাবলী বীৰ ভদ্ৰসেন ।  
 ভীমৰ শক্তি যেন তোমাবো তেমন ॥  
 যদি ভীম নোহা তুমি তাহান সদৃশ ।  
 অজব অমৰ বীৰ দুৰ্জয় মুনিষ ॥

3. Answer two of the following questions :—

24

- (a) Describe the life of Bhimsen as a cultivator.  
 (b) What is the inner significance of the wanderings and experiences of the Pāṇḍavas in the forest?  
 (c) Reproduce the story of one of the following poems, pointing out briefly the moral of the piece, — অচিনা, বিবাদ, টিপাম ডেকা  
 (d) Which is your favourite poem in *Nirmālī*? State the reasons for your preference.

4. Give the prose rendering of :—

6

পাৰ্শ্বৰ দুখৰ ব'ত লেশ মাথোঁ নাই,  
 বিৰাজিছে আজি তেওঁ সেই সুখধাম,  
 অনন্তৰ বেহৰুপ সুখভোগ পাই  
 সংসাৰ যুজৰ পৰা লভিছে বিশ্রাম।  
 স্বৰগৰ সুখভোগী হস্তে ত্রনে শোক  
 নোহেনে মিছাতে বাক কোৱাচোন মোক ?

5. Explain the following unseens :—

10

কিস্ত হাঁয়। এই দখ অতি ভয়ানক।  
 একোঁকথা নোসোধাকৈ গুৰু 'বিবেকক'  
 নকৰিবা ইকালত,—প্ৰাণ যায়ে যক।  
 জীৱনৰ সোৱে-বাৱে আছে দুটি বাট,  
 পৰিছাহি তোমালোক তাৰে দোমোজাত,  
 ওলমিছে ভাল-বেয়া নৰ জীৱটিৰ  
 বাছনিৰ ওপৰতে সেই দুয়োটিৰ।

6 Translate the following passage into Assamese :—

20

Rāma Saraswati, the most voluminous Assamese writer of the sixteenth century, was the court poet of Mahārāja Naranārāyaṇa, King of Cooch Behar. He prepared the translation of the whole of the Sanskrit *Mahābhārata* into metrical Assamese under the patronage of Naranārāyaṇa. He was a contemporary of Sankardeva. When Sankardeva was translating *Bhāgavata-Purāṇa* into Assamese verse in Cooch Behar, Rāma Saraswati was engaged in the translation of the *Mahābhārata*. He was the second son of Kavi-Churamani, and the grandson of Jayasaraswati, both of whom lived in a village called Chāmatiyā in Kāmarupa. His father Kavi-Churamani was a famous scholar of the time and kept a Sanskrit *tol* which was resorted to by students from far and wide, and he wrote a book on arithmetic which still exists.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following passages :—

20

(a) সেই সময়ত ডাঙৰ সদাগৰি জাহাজৰ বাহিৰে ডাকনিয়া বা বেগাই চলোৱা জাহাজ নাছিল। সেইহেতু ঘাটে ঘাটে মাল লৈ যাওঁতে কোনো কোনো ঘাটত মাল অনুযায়ী জাহাজ দুদিন তিনিদিন বখি থাকিব লাগিছিল। এনেকৈ যাওঁতে ডিব্ৰুগৰৰ পৰা গোৱালন্দ পোৱাত ১২ দিন লাগিছিল। গুৱাহাটী কিমান দিনত পলেগৈ যোৰ মনত নাই, কিন্তু গুৱাহাটীৰ পৰা মই সত্যনাথবৰাৰ লগত গোৱালন্দহঁদি কলিকতা পাওঁতে অতি কমেও এসপ্তাহমান হব পায়।

(b) সত্যনাথবৰাই নিজেও সাধা অনুসাৰে সুবিধা পালেই ভ্ৰমণ কৰিছিল। তেওঁ কলিকতাত থকাত ছাত্ৰ অৱস্থাতে ৫গ বুজি কলিকতাৰ ওচৰৰ বঙ্গদেশৰ কেইবাখনো নগৰ চাই আহিছিল। যেতিয়া তেওঁ পাচকৰি গুৱাহাটীত উকিল হৈ নিজে আজিবলৈ ধৰিলে তেতিয়া ডেকা দোখৰত প্ৰত্যেক পূজাৰ ছুটিতে দেশ ফুৰিবলৈ গৈছিল। কালীত তেওঁৰ দদায়েক বাসকৰি থকাত মাজে মাজে সময় বুজি কালীলৈ গৈছিল। ১৯১৭ চনত তেওঁ পুৰিলৈ যায়।

(c) সূৰ্য্যকুমাৰ বৰুৱা নামে এটি লৰা পাঁচ বছৰ বয়সতে হৰদণ্ডই তেওঁৰ ঘৰলৈ আনি তুলি তালি ডাঙৰ দীঘল কৰিছিল। পাঁচ বছৰতে সূৰ্য্যৰ বাপেক মাক মৰিল। বাপেক মাকৰ অভাৱত তেওঁক পোহ পাল কৰোতা কোনো নাছিল, দয়ালু হৰদণ্ডই আনি প্ৰতি পাল কৰিবলৈ ধৰিলে। তেওঁৰ বাপেক যদিও দুখীয়া আছিল তথাপি ভাল মানুহৰ ঘৰৰ আৰু হৰদণ্ডৰ ঘৰত সদাই উপাসা ভৰণা কৰি থকা মানুহ। সেই বাবে হৰদণ্ডই কেও কিছু নাইকিয়া সেই মাউৰা লবটিক বৰ মৰম কৰি অতি অদৰেৰে তুলিছিল।

2. Explain with reference to the context any three of the following :—

18

(a) এতিয়াহে বুজিলে যে এই সংসাৰত তেওঁ বাপেক মাক আৰু বন বন্ধ ৰাখিব নাইকিয়া মাউৰা লৰা। এতিয়াহে তেওঁৰ ধৰণা হল যে এই সংসাৰ কেৱল এটা কোৱান্তাতুৰী।

(b) চতুৰ দীৰ্ঘদৰ্শী বৰজুকনে হৰদণ্ড বাঘক বধ কৰিবলৈ এপাট অস্ত্ৰ গোটেই লাগি বুলিহে সূৰ্য্যকুমাৰক এই কৰুণা দেখুৱাইছিল।

(c) অসমীয়া শিক্ষিত ডেকাই তেতিয়াৰ দিনত অসমীয়া সাহিত্যৰ যেন চৰ্চা কৰিবই লাগিব এনে এটা হেচাবদি ভাব সকলোৰে মনত আছিল বুলি অনুমান হয়। ইয়াৰ পিচতহে এই ভাব আকৌ সেমেকা পৰে।

(d) সাৰথিৰ ভাষাই পঢ়োতা আৰু লিখোতাৰ যথেষ্ট প্ৰভাৱ চলাইছে। ইয়াৰ কেতবোৰ বাক্য অসমীয়া লিখকৰ ৰচনাৰ স্বভাৱতে ব্যৱহাৰ হ'ব ধৰিছে।

3. Explain one of the following :—

15

(a) যদিও প্ৰজা হৈ ৰজাৰ বিপক্ষে অন্তৰলোৱা ধৰ্ম বিগৰ্হিত কাৰ্য্য, গুৰুৱাক্য লজ্জন ততোধিক পাপ। তাতে গুৰুৰ অপমানৰ প্ৰতিশোধ লোৱা উচিত, ইয়াকে ভাবি মোৱামৰীয়া বিলাকে ৰজাৰ বিপক্ষে গোট খাবলৈ ধৰিলে। বাজেন্দ্ৰবাসিংহ স্বৰ্গদেৱে মনকৰাহলে, মোৱামৰীয়াইতে যি জোপা বিষবৃক্ষৰ গুৰিত সাৰ দি লাহে লাহে বঢ়াবলৈ ধৰিছিল, পুলিতে তাক নষ্ট কৰিব পাৰিলে হেতেন। কিন্তু তেওঁৰ সুখভোগাভিলাষ কিছু বেছি আছিল। তেওঁ সেইবিলাক বাহিৰৰ জঞ্জাললৈ সমূলি কাণ নকৰিছিল। মোৱামৰীয়াইতে বাধা নেপাই সেনাগোটাই লাহে লাহে নিজৰ পক্ষ বেচি শক্ত কৰিবলৈ ধৰিলে।

(b) পাশ্চাত্য পণ্ডিত সকলৰ বহুতে কয়, প্ৰগীজগতৰ ক্ৰমিক অভিব্যক্তিৰ যি নিয়ম সেই নিয়মেই মানৱ জাতিৰ সভ্যতাতো খাতিছে। যোগ্যৰ উন্নতি অযোগ্যৰ অধঃপাত, পূৰ্বপুৰুষৰ গুণ বা বিশেষত্বৰ আধিকাৰ প্ৰভুতিৰ ডাঙৰ নিয়ম বোৰৰ দ্বাৰাই পৃথিৱীৰ জাতিবিলাক অসভ্য অৱস্থাৰ পৰা সভ্য অৱস্থালৈ উঠিছে। অভিব্যক্তিবাদি বিলাকে কয় জীৱনবৰ্দ্ধক নিমিত্তে হোৱা যুজলৈ সাজু হ'বৰ কাৰণে মানুহে নানা উপায় কৌশল উদ্ভাৱন কৰে সেই উপায় অৰ্জা উপায় আৰু কৌশল একপুৰুষৰ পৰা আন পুৰুষে আধিকাৰ কৰে আৰু চৰিত্ৰত সেই বোৰ শক্তি পোতখায় বয়।

4. Answer any two of the following :—

19

(a) Write a short essay on the prose style of Satyanath Borah.

(b) Write a critical estimate of বহলফাকৰণ

(c) Compare and contrast the prose styles of Satyanath Borah and Hemchandra Boruah

5. State in what sense the তদ্ধিত particles উৱা and ঈ and the কৃৎ particle ওঁতা are used and give an example of each of them 7

6. Write all the suffixes used in framing the plural from the singular number, and state the different senses in which they are used. 8

7. (a) Compare and contrast the characters of বীৰদণ্ড and কলীয়াভোমোৰা বৰফুকন. 16

(b) Describe the political condition of Kamrup during the time of কলীয়াভোমোৰা বৰফুকন.

## URDU (FOR FEMALE CANDIDATES)

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Examiner—KHAN BAHADUR REZA ALI WAHSHAT

## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

25

کہتا اک پہاڑوں سے بطحا کے اُتھی  
 پڑی چار سو یک بیک دھوم جسکی  
 ترک اور دمک دور دور اُسکی پہنچتی  
 جو ٹیگس پر گرجی تو گنگا پہ برسی  
 رہے اُس سے محروم اُبی نہ خاکی  
 ہری ہو گئی ساری کہیتی خدا کی

کیا اُمیدوں نے جہاں میں اُجالا  
 ہوا جس سے اسلام کا بول بالا  
 بتوں کو عرب اور عجم سے نکالا  
 ہر اک تدریسی ناؤ کو جا سنبھالا  
 زمانے میں بھلائی توحید مطلق  
 لگی آنے گھر گھر سے آواز حق حق

ہوا غلغلہ نیکیوں کا بدوں میں  
 پڑی کھلبلی کفر کی سرحدوں میں  
 ہوئی آتش افسردہ آتشکدوں میں  
 لگی خاک سی آرنے سب معبدوں میں  
 ہوا کعبہ آباد سب گھر اجڑکر  
 جمے ایک جا سارے دنگل بچھڑکر

2. *Either*, Describe in your own words in Urdu the condition of Arabia 25  
and the Arabs before the birth of the Prophet.

*Or*, State briefly in your own words what the Prophet taught the  
Arabs and how he changed their entire nature.

3. *Either*, Give the rule with examples for the formation of plurals 10  
of masculine and feminine nouns (nominatives).

*Or*, State with examples the rule for the use of نے

4. Correct the mistakes in the following :—

15

اُسکے تمام لڑکوں نیک ہیں - عورتوں عقل میں  
مردان سے کم نہیں ہیں - آپ کیا کہے ہم تو کچھ  
نہیں سمجھے - اُسکا دل میں ذرا رحم نہیں - تم کو  
کون بلایا ؟ - ہم تمہاری آواز نہیں سنے - یہ سخت  
روٹی ہم نہیں کھانے سکتے ہیں - تم ناحق قسم کھائے -  
کل اگر آپ نہیں آتے تو اچھا ہوتا - ہم اُسکو کل رستے  
میں دیکھے تھے - آپ مجھ سے کیا کہنے چاہتے ہیں -  
اُسکا چار بیٹا ہے \*

5. Translate into Urdu ONE of the following extracts :—

25

(a) The tigress rushed out towards our side, and stood for a moment. I had never seen a tiger before, and could not help admiring her noble appearance. There she stood, her tail erect, the end of it waving from side to side glaring on us with her fearfully bright eyes. My father fired, and then the others; I could see the whole distinctly, but I had no gun. She staggered when my father fired, he had evidently hit her; but the rest had missed, and she charged with another tremendous roar, right at our party.

(b) When I was studying medicine at Damascus and had even begun to practise that admirable science with considerable success, a slave one day came to enquire for me, and he desired me to go to the house of the governor of the city, to visit a person who was ill. I accordingly went and was introduced into a chamber where I perceived a very handsome young man; but he seemed very much depressed, apparently from some pain he suffered. He returned no answer to my salutation, but showed me by a look that he understood me and was grateful for my kindness.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any two of the following extracts into English :—

25

(a) بمبئی سے پورٹ سعید تک جہاز پر کوئی  
مسلمان نہ تھا - یہاں پہنچ کر دو ایک مسلمان نظر

آئے اور بیروت میں تو سارا جہاز شامی عربوں سے بھر گیا۔ بدقسمتی سے فرست اور سکند کلاس کو تو یہ عزت نصیب نہیں ہوئی لیکن تیسرے درجے میں ہر طرف مسلمان ہی مسلمان تھے۔ میں شروع سفر سے مسلمانوں کی صورت کو ترس گیا تھا۔ یہ مجمع دیکھ کر حد سے زیادہ خوشی ہوئی۔ فرست کلاس کی چہت نہایت صاف اور پرفضا جگہ تھی اور میں اکثر وہیں بیٹھ کر دریا کی سیر کیا کرتا تھا۔ لیکن جب یہ صعبت نصیب ہوئی تو میں نے بھول کر بھی اُدھر قدم نہیں رکھا \*

(b) ۲۲ مئی صبح کے وقت قسطنطنیہ پہنچ کر جہاز نے لنگر کیا۔ یہ ایسا وقت تھا کہ مجھ کو منزل مقصود پر پہنچنے کی نہایت خوشی ہوئی چاہئے تھی لیکن قلیوں اور ملاحوں کے ہنگامے اور شور و غل میں میرے حواس جاتے رہے۔ ملاحوں نے تمام جہاز گھیر لیا۔ اُنکے شور و غل اور کشاکش سے ایک ہنگامہ برپا تھا۔ میں نے پہلے سے کچھ طے نہیں کیا تھا اور نہ کر سکتا تھا کہ جہاز سے اتر کر کہاں جاؤں۔ ہوٹل میرے مناسب حال نہ تھا (اسکی وجہ اگے چل کر معلوم ہوگی) اور سراؤں پر ناواقفیت کی وجہ سے اطمینان نہیں ہو سکتا تھا۔ سخت مصیبت یہ ہوئی کہ شامی احباب جن سے ہر قسم کی مدد کی توقع ہو سکتی تھی اُنکو کالج میں پہنچنے کی جلدی تھی اسلئے وہ میرا انتظار نہ کر سکے \*

(c) یہاں کے بورڈنگ سسٹم میں بظاہر ایک نقصان معلوم ہوتا ہے وہ یہ کہ الگ الگ کمرے نہیں ہوتے بلکہ پچاس پچاس ساٹھ ساٹھ



لڑکوں کے لئے ایک بڑا ہال ہوتا ہے جس میں آنکسی تعداد کے موافق پلاننگ پیچھے ہوتے ہیں۔ ہر پلاننگ کے سرہانے ایک چھوٹی سی سامری ہوتی ہے جس میں معمولی کپڑے اور کتابیں آ جاتی ہیں۔ میں نے جب اول اول یہاں کے بروننگ دیکھے تو آنکسی حقارت کا خیال پیدا ہوا خصوصاً اس وجہ سے کہ مدرسۃ العلوم کے ہر تکلف اور آراستہ کمرے میری آنکھوں کے سامنے تھے لیکن زیادہ تحقیق سے معلوم ہوا کہ یہ طریقہ فائدے سے خالی نہیں \*

2. Give the meanings of any five of the following words :—

کثیف - پرفضا - غریب الوطن - متعدد - محکمہ  
قضا - اشتہا - ارباب تصانیف \*

3. Give in your own words an account of any of the places of historic interest mentioned in Shibli's *Safarnāma*

4. Translate into English :—

35

اسی روز مادھر اچارج بھی نو دیپ واپس آ گیا۔  
ہیم چندر اپنے سفر کا حال بیان کر کے کہنے لگا ”اتنی معنت کرنے سے کچھ کام تو ضرور نکلا۔ اس ملک کے بہت سے راجاؤں نے وعدہ کر لیا ہے کہ وہ اپنی فرج لیکر نو دیپ میں جمع ہو جائیں گے اور مسلمانوں سے مقابلہ کریں گے۔“ ہیم چندر نے جواب دیا ”اگر وہ لوگ آج یہاں نہ پہنچ گئے تو پھر انکا آنا بے سود ہوگا۔ مسلمانوں کا لشکر آ گیا۔ مہابن میں ٹھہرا ہے۔ آج یا کل وہ اس شہر پر حملہ کریں گے۔“ یہ سنکر مادھر اچارج کو تعجب سا ہو گیا۔ کہنے لگا ”یہاں راجا کی طرف سے کیا انتظام ہوا؟“ ہیم چندر نے جواب دیا ”کچھ بھی نہیں۔ غالباً راجا کو اسکی خبر نہیں۔ مجھے تو یہ بات معض اتفاق سے کل معلوم ہوئی۔“ مادھر بولا ”تم نے راجا کو جا کر خبر کیوں نہ دی؟“

## 5. Translate into Urdu :—

Near a large wood lived a woodman and his wife, who had but one child, a girl of three years. They were, however, so poor that it was with difficulty they could maintain themselves; and at length, matters becoming worse, they had no longer even bread to eat. One morning the man went forth, full of trouble, to pursue his occupation; and as he was chopping wood, suddenly a tall beautiful woman stood before him with a crown of brilliant stars on her head, who addressed him, saying—'You are poor and needy; bring me your child, and I will take it with me, be a mother to it, and take care of it from this time.'

## HISTORY

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## FIRST PAPER

## HISTORY OF ENGLAND

*Candidates are required to give their answers in their own words  
as far as practicable.*

*Attempt any SIX questions in all; of which two must be  
from each group*

*All questions are of equal value*

## GROUP A

1. Estimate the importance of the conversion of England to Christianity.

2. 'Alfred the Great deserves a place amongst the greatest rulers of the world.' Why?

3. How far does the Magna Carta mark the beginnings of English liberty?

4. Estimate the importance of the parts played by (a) Robert Bruce. (b) Wallace, in Scotland's struggle for liberty with England.

5. 'In the wars of the Roses, we have family ambition aiming at the throne of England.' Explain.

6. Narrate the story of Mary, Queen of the Scots. Why was she executed?

#### GROUP B

7. How far was the execution of Charles I 'a cruel necessity'?

8. Discuss the effects of the English Revolution of 1688 on (a) Protestantism in England, (b) the English Constitution.

9. Give an account of the Industrial Revolution in England.

10. 'Palmerston was Liberal at home and Conservative abroad.' How far does this observation apply to his foreign policy?

11. 'Seldom in English history have two great statesmen living in the same age been so different as Gladstone and Disraeli.' Discuss.

12. Draw a sketch map of England to illustrate one of the following :—

(a) The chief battles of the wars of the Roses.

(b) The chief battles fought during the great rebellion of 1642.

Show how the country was divided between the King and Parliament

### SECOND PAPER

#### HISTORY OF GREECE AND ROME

*Candidates are required to give their answers in their own words as far as practicable*

*Only six questions need be answered, of which at least two must be attempted from each group*

*All questions are of equal value*

#### GROUP A

1. Give a brief account of the pre-Hellenic civilization in Greece.
2. Shortly describe Greek Society as depicted in the *Iliad* and *Odyssey*.
3. Give a brief account of Athens under Pericles.
4. Summarize briefly the history of the Peloponnesian war.
5. Indicate the causes that led to the downfall of Athens.
6. Write notes on any four of the following :—Themistocles, Brasidas, Socrates, Alcibiades, Plato, Cleon, Nicias, and the Olympic games.

#### GROUP B

7. Briefly describe the reforms of Servius Tullius.
8. Account for Rome's success in the Second Punic war.
9. Review the career of Scipio Africanus Major.
10. What special circumstances in the political and economic condition of Rome made the Catiline conspiracy possible?
11. Give a short history of the spread of Christianity in the Roman Empire.
12. Write notes on any four of the following :—Lucretia, Sulla, Diocletian, Cleopatra, the battle of the Metaurus, and the Decemviri.

## LOGIC

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„ ADHARCHANDRA DAS, M.A.		
„ ABDUL BAQUI, M.A.		

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Fully discuss the question whether Logic deals only with consistency of thought or with truth of thought as well, with explication of knowledge only or with its amplification as well. 14

*Or*, What do you understand by the denotation and the connotation of a term? Show that they are inseparable aspects of every term. Illustrate your answer.

2. *Either*, State briefly the main theories of the import of propositions, and discuss fully any one of them. 14

*Or*, Distinguish between a term and a proposition. Explain the distinction between a Verbal and a Real proposition. Give examples.

3. State the quality and the quantity of the following propositions, and give the obverse and the contrapositive of them all :— 14

- (a) Only the educated are fit to vote
- (b) A few drops of rain are not of much consequence.
- (c) Man proposes, God disposes.
- (d) A few men will not suffice to remove this big table.

4. *Either*, Explain and illustrate property, differentia, circle in definition, and infima species. Examine the following definitions, and explain in each case, if it is faulty, why it is so :— 14

- (a) Time is the moving image of eternity.
- (b) A gentleman is a person who moves in good society.
- (c) A judge is a lawyer who exercises judicial functions.
- (d) Peace is the absence of war.

*Or*, Explain and exemplify the fallacies of Accident and Division.

5. *Either*, Define Mood and Figure. Show that if the middle term of a valid syllogism is distributed in both the premises, the conclusion must be particular. 14

*Or*, What is a Dilemma? Give its different forms and illustrate it by an example. Examine the following dilemma :—

If Logic deals with the matter of thought, it must either consider the whole of it, and then be identical with all science; or consider only a part of it without being able to give a reason why it should choose one part rather than another. But both of these alternatives are absurd. Therefore Logic does not consider the matter of thought.

6. *Either*, Reduce both by the Direct and the Indirect Method a concrete example of (a) Baroco, and (b) Bramantip. 14

*Or*. Discuss fully the question whether the Syllogism can be regarded as a real inference, and whether it is vitiated by the fallacy of *petitio principii*.

7. Analyse and test any four of the following arguments, and mention the fallacy (if any) which they involve :— 16

- (a) It hoots : so it's only an owl.
- (b) Learned men sometimes become mad; but as he is not learned, there is no danger to his sanity
- (c) All men are not industrious; but Brown is industrious. So he cannot be a man.
- (d) Some mineral compounds are not decomposed by heat; therefore no organic substances are mineral products, since all organic substances are decomposed by heat.
- (e) If this patent medicine is of any value, those who take it will improve in health. Therefore it is of value, since my friend who has been taking it has improved in health.
- (f) The end of life is its perfection; death is the end of life; therefore death is the perfection of life.
- (g) He must be an Englishman, for all Englishmen hold such views.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, "The difference between deduction and induction is not one of principle, but of starting point." Discuss. 14

*Or*, What is an induction? How is it arrived at? Define a cause, stating and illustrating the essential marks of the causal relation.

2. *Either*, What is the pre-supposition of induction? Mention the different ways in which it has been formulated. Which of them do you think to be most adequate and why? 14

*Or*, What is meant by Plurality of Causes? Give examples to illustrate your answer

3. *Either*, Explain the functions of Analogy and Hypothesis in Induction. 14

*Or*, State and illustrate the canon of the Method of Difference. Why is this method applicable only to the spheres where experiment can be employed?

4. *Either*, 'A perfect experiment establishes a law.' Explain this with examples, and show wherein the superiority of experiment over observation lies. 14

*Or*, Explain, with examples, the Method of Concomitant Variations, and its relation to the Method of Difference.

5. *Either*, Distinguish between 'theory' and 'hypothesis.' Do hypotheses play any part in assisting observation? Give the canons to which a good hypothesis must conform. 14

*Or*, Describe the nature and limits of scientific explanation, illustrating its different forms. Give two examples of fallacious or illusory explanation.

6. *Either*, Explain and illustrate the following :—imperfect induction, negative instance, *experimentum crucis*, classification by type. 14

*Or*, Construct an inductive argument to prove that some article of food or some habit is beneficial or injurious to you; and analyse your reasoning showing the method or methods employed by you.

7. Test the following arguments :— 16

(a) Scarlet poppies, scarlet verbenas, the scarlet hawthorn, and honey-suckle are all odourless; therefore we may conclude that all scarlet flowers are destitute of odour.

(b) The planet Mars resembles the Earth in possessing atmosphere, water, and moderate temperature, and we may therefore suppose it to be inhabited.

(c) It has been found that linnets when shut up and educated with singing larks—the skylark, wood lark or tit lark—will adhere entirely to the songs of these larks, instead of the natural song of the linnets. We may infer therefore that birds learn to sing by imitation and that their songs are no more innate than language in man.

(d) Vesalius, the founder of modern anatomy, found that the human thigh bone was straight, and not curved, as Galen, the great authority on the subject for over a thousand years, had asserted. Sylvius replied that Galen must be right; that the bone was curved in its natural condition, but that the narrow trousers worn at the time had made it artificially straight.

## ELEMENTARY CIVICS

## FIRST PAPER

*Paper-Settlers*— { MR. DURGAGATI CHATTORAJ, M.A.  
 PROF. SATISCHANDRA RAY, M.A.  
 SIR. J. C. CAYAJI, KT., B.A.

*Head-Examiner*—PROF. PRAMATHANATH BANERJEA, M.A.,  
 D.SC., BARISTER-AT-LAW.

*rs*— { PROF. SOBHAMAY GHOSH, M.A.  
 „ SATKARI MITRA, M.A.  
 „ ABDUS SAMAD, M.A.  
 „ HARICHARAN GHOSH, M.A.  
 „ KHAGENDRANATH SEN.  
 „ MANORANJAN BHATTACHARYYA.  
 „ PANCHANAN CHAKRABARTI, M.A.  
 „ PRAKASCHANDRA MALLIK, M.A.  
 „ ABDUL SADEQUI M.A.  
 „ ANWARUL AZIM, B.A., LL.B.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any six questions*

*All questions are of equal value*

1. If you find that the elections to the municipal board of your town are not properly conducted or are interfered with by interested parties, what should be your duty as a citizen?

2. What are the rights of a citizen to (a) a public meeting, (b) freedom of speech?

3. Distinguish between a faction and a political party. What are the merits and defects of the Party system?

4. Define Provincial Autonomy. What are its distinguishing marks? Does Bengal enjoy provincial autonomy now?

5. The general control, superintendence, and direction of the affairs of India vest in the Secretary of State for India. Explain the terms italicized, and show by examples how each of these functions is exercised.

6. What is popular government? Mention the essentials of such a form of government.

7. What is ministerial responsibility? Does it exist in the Indian constitution?

8. 'Rights and duties go together.' Explain

9. Explain the relationship between law and liberty.

10. Write short notes on—

(a) The Simon Commission.

(b) Safeguards in the future constitution of India.

(c) Difference between transferred and reserved subjects in the Provincial governments

(d) Political and civil liberty.

SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*All questions are of equal value*

1. Indicate the various lines on which the co-operative system of India has benefited the country.
2. Discuss the influence of the development of the railway system in India upon (a) the rural economy of the country, (b) its foreign trade.
3. Indicate the main causes of agricultural indebtedness in India, and suggest methods for alleviating the burden.
4. What are the leading factors of production? What are the chief principles determining the remuneration of each of these factors?
5. On what main principles can equity in taxation be secured?
6. What is your idea of the scope of Economics?  
Discuss the value and limitations of the chief methods of its study.
7. Enumerate some of the principal cottage industries of Bengal which can be carried on as subsidiary to agriculture. Suggest how best they can be fostered or preserved.
8. In what directions has the standard of living in India risen during the last century? Distinguish in your answer between the conditions in towns and in the mufasssil.
9. Describe briefly the social, economic, and sanitary conditions of a typical Bengal village, and suggest how an all-round improvement can be made by village co-operation.
10. Indicate the place and potentialities of (a) the Income Tax, and (b) the Salt Tax in the revenue system of India

COMMERCIAL GEOGRAPHY

*Paper-Setters*— $\left\{ \begin{array}{l} \text{DR. HARISCHANDRA SINHA, PH.D.} \\ \text{MR. MOHITKUMAR GHOSH, M.A. (CAL.), B.COM.} \\ \text{(LOND.).} \\ \text{DR. NALINIMOHAN PAL, PH.D.} \end{array} \right.$

*Examiners*— $\left\{ \begin{array}{l} \text{MR. HEMANTAKUMAR SEN, M.A.} \\ \text{,, SACHINRANATH SENGUPTA, M.A.} \end{array} \right.$

FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*All questions carry equal marks*

1. State the situation and describe the course of any three of the following rivers, mentioning in each case the geographical circumstances that give importance to it as well as any that detract from its value :—(a) Indus, (b) Murray, (c) St. Lawrence, (d) Irrawady, (e) Nile.
2. If on a map showing mean annual temperature two towns lie on the same isotherm, how far would one be justified in concluding that they had the same temperature conditions?



3. What are the *three* important countries of the world exporting cotton in considerable quantities? Describe fully the conditions of production and the quality of cotton produced in each.

4. State the situation, and the physical conditions that are characteristic, of the great fishing-grounds of the world. Account for the localization of the British fishing industry at a few ports.

5. Analyse the factors governing the climate of the British Isles, pointing out the advantages as compared with other regions in Europe in the same latitude.

6. Examine and estimate the coal and petroleum resources of U.S.A.

7. Describe the general character of the manufacturing industries of Switzerland, giving illustrations, and indicate the circumstances adverse and favourable to their development.

8. Give a geographical description of Java, mentioning her principal exports.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The figures in the margin indicate full marks*

1. Draw a map showing the principal railway systems in India. 20
2. Examine and estimate the importance of the following agricultural products in India :—(a) wheat, (b) rice, (c) maize, (d) cotton, (e) jute.
3. Account for the localization of the cotton industry in Bombay. 16
4. Discuss the position and importance of the iron and steel industry in India. 16
5. Carefully estimate the oil resources of India. 16
6. Describe the different types of irrigation works in India. 16
7. Discuss the importance of the following places :—(a) Benares, (b) Lyallpur, (c) Delhi, (d) Cawnpur, (e) Narainganj, (f) Bangalore, (g) Jamshedpur. 16
8. Account for the concentration of population in the Ganges valley. 16

## COMMERCIAL ARITHMETIC AND ELEMENTS OF BOOK-KEEPING

*Paper-Setters*—{ MR. K. S. MITRA.  
,, NARENDRAKUMAR MAJUMDAR, M.A.  
,, NARENDRANATH SARKAR, M.A.

*Examiners*—{ MR. G. BASU, B.A., A.S.A.  
,, S. ZAMAN, B.A., A.C.A.

### FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any SEVEN out of the following questions may be attempted*

*All the questions are of equal value*

*Two marks are reserved for neatness*

1. A triangular field has its sides of length 111 yds. 2 ft., 119 yds. 4 in., and 134 yds. respectively. A farmer wishes to have a wire fence round the field,

and supports are to be fixed at equal distances apart all round the field. What is the greatest distance apart of the supports in order that one should be fixed at each of the three corners? Also, how many supports would there be, and what would be the cost at Rs. 2-11-9 each?

2. A wall 53 yds. long, 8 ft. high, and 9 in. thick, costs £ 134. 15s. Find the cost at the same rate of a wall of the same thickness and 6 ft. high, which encloses a garden 45 ft. long and 33 ft. 9 in. wide, if a gap 7 ft. wide is left.

3. The salary of a traveller consisted partly of a fixed sum and partly of commission, which was proportional to the value of the orders obtained. In two consecutive years he obtained orders to the value of Rs. 31,500 and Rs. 45,000 respectively, and he received Rs. 2,545 and Rs. 2,950 respectively. If his salary for the next year was Rs. 3,200, what was the value of the orders obtained? If he had obtained orders to the value of Rs. 6,000, what would have been his salary?

4. M. & Co. of Tokio bought of N. & Co. of Calcutta the following goods on September 13, 1931, terms 2 per cent. cash :—

- 5 pieces bleached Calico (1579), 186 yds. at  $4\frac{1}{2}$  annas;
- 3 pieces unbleached Calico (1613), 92½ yds. at  $3\frac{1}{2}$  annas;
- 29 pieces Flannel (795), 198 yds. at  $10\frac{1}{2}$  annas;
- 67 pieces Flannelette (1051) 394½ yds. at  $6\frac{1}{2}$  annas.

The first two items are subject to a trade discount of  $7\frac{1}{2}$  per cent., and the remaining two to a trade discount of 5 per cent.

Prepare an invoice in proper form.

5. A dealer sold three pianos for Rs. 300, Rs. 150, and Rs. 500 respectively, thereby gaining 5 per cent. on the total selling price. He lost 4 per cent. by the sale of the first and gained  $7\frac{1}{2}$  per cent. by selling the second, the percentages being based on selling prices. What percentage gain did he obtain by selling the third?

6. 75 cases of a certain commodity were sold to an importer for Rs. 8,450 f.o.b. at the foreign port, each case measuring  $4'3" \times 3'4" \times 2'6"$ . The importer had to pay for the following :—Freight, Rs. 23-12-0 per ton of 40 cub. ft., plus 10 per cent. primage; Marine Insurance on Rs. 9,000 at Rs. 5-11-0 per cent., plus 15 per cent.; Customs Entries, Rs. 2-7-0; Landing Dues, Re. 10-11-9 per case; Opening for inspection by Customs Office, 7 cases at Re. 1-3-6 per case; plus 20 per cent.; Delivery, Re. 1-3-0 per case; Rent for warehousing, 5 weeks at Re. 0-3-0 per week; Insurance, 2 months on Rs. 10,000 at Rs. 3-1-6 per cent. per annum; Cartage, Re. 1-1-0 per case for 30 cases; and Re. 1-3-6 per case for 45 cases.

Find the total cost to the importer.

7. Find the fifth root of 319383 correct to the third place of decimals.

Given  $\log 31938 = 4.5432980$ ,  $\log 31939 = 4.5133105$ ,  $\log 12842 = 4.1086327$ ,  $\log 12813 = 4.1086665$ .

8. There are two one-pint decanters, containing liquor and water in the ratios of 11 : 4 and 10 : 5 respectively. The contents of the two decanters are poured into a two-pint decanter and the mixture is sold at Re. 1/- a pint, thereby realizing a profit of two annas per pint. Find the cost price of a pint of the liquor.

9. An Indian hide merchant has exported goods to three customers in London, Hamburg, and New York, and the bills for these places amount to Rs. 35,721-6-9, Rs. 40,12-8-6, and Rs. 73,684-14-3 respectively. According to arrangement, he is to draw out his bills in terms of the currency of the country to which each particular customer belongs, and at the rates for sight drafts prevailing in Calcutta at the date the bills are drawn. Supposing these rates to be 1s. 5½d. per Re. 1/- for London, 150 marks for Rs. 100/- for Hamburg, and Rs. 277/- for 100 dollars for New York, find the amounts of the above bills in English, German, and American currencies respectively.

## 10. What is discount?

On November 1, 1930, a Banker discounts a bill for Rs. 253/- due exactly three months hence. Find the total amount to the discount and by how much it exceeds the true discount, assuming the rate to be 12 per cent. per annum.

11. Imperial Bank of India fully paid shares are selling at Rs. 1,054-8-0, and 4 per cent. Calcutta Port Trust Debentures (1908-38) at Rs. 83-12-0. An investor has Rs. 9,307-12-0 at his disposal and he purchases a total number of 30 units of the above two securities. Calculate how many securities of each class he buys.

12. Distinguish between the following classes of annuities :—(a) Annuity Due, (b) Immediate Annuity, (c) Annuity deferred Five Years, (d) Continuous Annuity, and (e) Perpetuity.

Find the present value of an annuity-due of 1 per annum payable annually for 2 years, the rate of interest being 5 per cent. per annum.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt any two of the following questions marked with an asterisk and any four of the rest, of which Question 1: must be one*

*The figures in the margin indicate full marks*

1. What is meant by the Double Entry system of book-keeping? 15  
How does it differ from the Single Entry system? Illustrate with example and indicate the advantages of the first system over the second

\*2. Give suitable rulings for Bills Payable and Bills Receivable Books, 14  
and enter the following bills therein :—

(a) Bill for Rs. 2,000 (Term : 60 days after acceptance) drawn by Roy Bros. on July 5, 1930. The bill was accepted on July 6, 1930, payable at Bank of India, Ltd., and was paid on the due date

(b) Bill for Rs. 1,750 (Term : 2 months after date) drawn on July 5, 1930, upon Sassoon & Co., Ltd. The bill was received after acceptance on July 6, 1930, payable at Bengal Central Bank, Ltd. Hare Street. It was dishonoured on the due date.

3. Journalize the following :— 18

(a) Furniture and Fittings Account (Rs. 5,700) to be depreciated at 5 per cent.

(b) Discount to be allowed on Sales (Gross Sales Rs. 1,80,000, less Returns Inward Rs. 4,000), at  $2\frac{1}{2}$  per cent.

(c) Present Reserve for Bad and Doubtful Debts amounts to Rs. 2,000. The total figure for Sundry Debtors is Rs. 60,000, of which Rs. 30,000 is absolutely good. Total Reserve is to be made for the balance at 5 per cent.

(d) B is taking over a business from A. The assets amount to Rs. 2,00,000, the liabilities to Rs. 80,000, and the purchase consideration is Rs. 1,00,000. Show the Journal entries in B's books to record the above transaction.

(e) Accounts are closed on December 31, and Salaries (Rs. 3,000), Rent (Rs. 500), and Telephone Bill (Rs. 35) for December are paid in January. Make the necessary adjustments

(f) The following are the appropriations from the last year's balance of the net profits :—Dividends, Rs. 25,000; General Reserve, Rs. 5,000; Bonus to employees, Rs. 2,000; Transfer to Sinking Fund, Rs. 10,000.

Pass the appropriate Journal Entry.

4. On January 1, 1931, A draws a bill on B for Rs. 1,000 payable 18  
2 months after date without days of grace. The bill is duly paid on maturity.

Show the proper Ledger Accounts in the books of A and B.

5. X sends a consignment of goods, invoiced at Rs. 12,000, to Y. 18  
Y clears the consignment and pays charges thereon : Freight, Rs. 500; Dock dues, Rs. 200. The goods are sold at 25 per cent. above the invoice price, and Y charges his commission at the agreed rate of 2½ per cent., and settles the account by payment in cash. Show the entries in Y's books.

\*6. What is Goodwill and how does it arise? Is it always a market- 14  
able commodity? Point out the exceptions.

'It is not always correct to calculate the figure for Goodwill in terms of the average of the profits of a number of previous years.' Explain by means of an example.

7. Explain the following commercial terms :—Nominal Account; 18  
Account Sales; Discounting; Acceptance of a Bill; Bad Debts; Rebate; Provision for Bad Debts; Brokerage; Composition.

8. Under what circumstances may the shares of a Company be forfeited? 18

5 shares of a Company (nominal value Rs. 10/- per share, called up Rs. 5/- per share, paid up Rs. 2/8/- per share) have been forfeited. Show the proper Journal and Ledger entries to be made to record the above transaction.

\*9 Sabyasachi and Naranarayana agree to admit Ashutosh, their 14  
manager, into partnership on January 1, 1930. Interest at 5 per cent. is allowed on Capital, which is as follows :—Sabyasachi, Rs. 10,000; Naranarayana, Rs. 5,000; Ashutosh, Rs. 1,000.

Ashutosh is to be credited with a salary of Rs. 300 per annum, Rs. 200 of which is to be debited to Sabyasachi and Rs. 100 to Naranarayana. After providing for interest on Capital, the profits are to be divided as follows :—Sabyasachi 4/9, Naranarayana 3/9, and Ashutosh 2/9. No interest is charged on drawings, which were as follows :—Sabyasachi, Rs. 1,500; Naranarayana, Rs. 800; Ashutosh, Rs. 400.

The profit for the year ended December 31, 1930, amounted to Rs. 4,250 before making any of the above adjustments.

Give the Partners' Accounts as they would appear in the Balance Sheet as on December 31, 1930.

\*10. (a) What are the books which a Joint-Stock Company must keep 7  
in order to comply with the requirements of the Indian Companies Act?

Indicate at least four of the other books which it is useful to keep.

(b) What is a Prospectus? Is every Company bound to issue a 7  
Prospectus and file a copy with the Registrar of Joint-Stock Companies?

11. P and Q are in partnership, sharing profits and losses equally. 18  
They decide to take in a third partner, R, on the following terms :—R is to pay in cash Rs. 10,000 to the old partners as premium, and bring in addition Rs. 10,000 into the business and be entitled to a fifth share of the profits and losses of the business.

Enter the above transactions into the books of the firm, and show what share of profits and losses each partner will now be entitled to.

12. The following balances have been extracted from the books of a Company as on December 31, 1930 :— 18

6 per cent. Debentures (1,000 of Rs. 100 each), Rs. 1,00,000; Interest paid on Debentures, Rs. 6,000; Land and Building (after depreciation), Rs. 75,000; Plant and Machinery (after depreciation), Rs. 2,10,000; Sundry Creditors, Rs. 50,000; Sales, less Returns, Rs. 5,25,000; Purchases, less Returns, Rs. 3,30,000; Stock as on January 1, 1930, Rs. 53,000; Investments, Rs. 2,13,000; Interest and Dividend received on Investments, Rs. 15,400; General Reserve, Rs. 1,00,000; Reserve for Bad and Doubtful Debts, Rs. 4,500; Balance of last year's Profit and Loss Account (Cr.), Rs. 12,500; Commission on Purchases at 2 per cent., Rs. 6,600; Salaries, Rs. 1,70,000; Printing and Stationery, Rs. 10,000; General Charges, Rs. 7,000; Sundry Debtors, Rs. 90,000,

The capital of the Company is divided into 8,000 ordinary shares of Rs. 100 each, Rs. 50 per share called up. Calls in arrear amount to Rs. 50,000.

Stock in hand as on December 31, 1930, is Rs. 60,000.

Prepare Trading and Profit and Loss Account for the year ending December 31, 1930, and a Balance Sheet as at that date.

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# I.A. and I.Sc. Examinations, 1932

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## MATHEMATICS

*Paper-Setters*— { PROF. NIKHILRANJAN SEN, D.Sc., Ph.D.  
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DR. RABINDRANATH SEN, M.A., Ph.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Express the roots of the equation 5

$$q^2x^2 - (p^2 - 2q)x + 1 = 0$$

in terms of those of  $x^2 + px + q = 0$ .

Solve  $\frac{a}{x} + \frac{b}{y} = 2a$ ,  $(a-b)x + (a+b)y = a+b$ . 7

Or, If  $x$  varies as  $y$ , when  $z$  is constant, and  $x$  varies as  $z$ , when  $y$  is constant, show that  $x$  varies as  $yz$  when both  $y$  and  $z$  vary. 6

A playground whose length and width are in the ratio 8 : 7 has two-thirds of it reserved for accommodation. If the width is to be diminished by one-ninth, in what ratio should the length be increased in order that the accommodation may be trebled? 6

2. Either, Find  $^nC_r$  by any method. 6

A candidate is required to answer six out of ten questions which are divided into two groups each containing five questions, and he is not permitted to attempt more than four from each group. In how many different ways can he make up his choice?

Or, Prove the Binomial Theorem when the exponent is a positive integer. 6

Expand  $\left(\frac{a}{b} + \frac{b}{a}\right)^{2n+1}$ , giving, in particular, the general term and the two middle terms 6

3. Prove the following :

(i)  $\log(ab) = \log a + \log b$  ; 3

(ii)  $\log_a m = \log_a m \cdot \log_a b$  ;

(iii)  $\log m = 2 \left\{ \frac{m-1}{m+1} + \frac{1}{3} \left( \frac{m-1}{m+1} \right)^3 + \frac{1}{5} \left( \frac{m-1}{m+1} \right)^5 + \dots \right\}$ . 6

4. Either, Prove that

$$\tan(A+B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$$

Express  $\tan 3A$  in terms of  $\tan A$  7

Or, Find  $\sin 18^\circ$ . 7

The sine of an angle is  $\frac{m^2 - n^2}{m^2 + n^2}$  ; find its tangent. 5

5. Either, For any acute-angled triangle, prove the following :

(i)  $a = b \cos C + c \cos B$  ; 5

(ii)  $\cos^2 A + \cos^2 B + \cos^2 C + 2 \cos A \cos B \cos C = 1$ . 7

Or, Draw the graph of  $\sin x$  from  $x = -90^\circ$  to  $x = +90^\circ$  tabulating at intervals of  $15^\circ$ . (*Mathematical tables may be used.*) 12

6. Prove that the portion of the tangent at any point of a parabola intercepted between that point and the directrix subtends a right angle at the focus. 8

Prove that the tangents at the ends of a focal chord intersect on the directrix. 5

7. *Either*, in an ellipse, prove that  $CS.CX = CA^2$ . 8  
 Show that the distance between a focus and an end of the minor 5  
 axis of an ellipse is equal to half the major axis.  
*Or* Prove that the tangent at any point of an ellipse makes equal 8  
 angles with the focal distances of the point.  
 Employ this proposition to draw the tangent at any point of an 5  
 ellipse.
8. *Either*, Prove that, in a trihedral angle, the sum of any two face 8  
 angles is greater than the third.  
 Prove that the sum of the angles of a skew quadrilateral is less 6  
 than four right angles.  
*Or*, Prove that all straight lines perpendicular to a given straight 8  
 line at a point are coplanar.  
 Prove that there cannot be more than three mutually perpendicular 6  
 straight lines in space meeting at a point.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any SEVEN questions, of which AT LEAST TWO  
 should be from the first six*

1. What is *acceleration* and when is it called *uniform*? Prove that a particle with an initial velocity  $u$  and a uniform acceleration  $f$  will cover a space  $s$  in time  $t$  given by

$$s = ut + \frac{1}{2}ft^2.$$

An express train which passes a station at the maximum speed of 45 miles per hour is brought to rest at the next station 2 miles distant in 33 seconds by applying brakes which produce uniform retardation. Find when and where the brakes were applied.

2. Find the maximum height attained by a particle thrown vertically upwards with a given velocity, and show that the time of rise is equal to the time of fall. How will these results be modified when the particle is projected up an inclined plane?

A stone is dropped into a well, and the sound of its striking the water is heard in  $2\frac{1}{2}$  seconds. If the velocity of sound be 1,120 feet per second, find the depth of the well [ $g = 32\text{ft./}(\text{sec.})^2$ ].

3. State *accurately* the three laws of motion.

A force equal to the weight of 1,000 grammes acts on a mass of 200 grammes for half a minute. Find the velocity acquired by the mass. After the force has ceased to act, if the velocity of the mass be halved by a sudden stroke on it, find the impulse of the stroke.

4. Prove that a projectile describes a parabola, the resistance of the air being neglected.

An aeroplane flying with constant velocity  $v$  at a constant height  $h$  passes directly over a gun. When the elevation of the aeroplane (angle between the direction of the aeroplane and the horizontal plane) is  $\theta$  the gun is fired point-blank at it. Show that the shot will hit the aeroplane when the angle  $\theta$  is so chosen as to satisfy the relation

$$2(V \cos \theta - v) \tan^2 \theta = gh,$$

where  $V$  is the initial velocity of the shot, its path being parabolic.



5. Two moving elastic spheres impinge directly on one another. Find the motion after impact.

A ball is dropped vertically on a fixed horizontal plane from a height of 100 feet. If the coefficient of restitution be 0.4, find the heights of the first and the second rebounds.

6. Define and explain *work* and *energy*. Give a simple illustration showing that in a mechanical system the sum of the potential and kinetic energies is constant.

A shot weighing 5 lb leaves the muzzle of a gun weighing 2,000 lb. with horizontal velocity of 800 feet per second. Compare the momenta and energies of the shot and the gun.

7. Two forces  $X$  and  $Y$  act at an angle  $\theta$  on a particle  $P$ . Find expressions in  $X$ ,  $Y$ , and  $\theta$  for the direction and magnitude of the resultant of the forces.

Two forces of magnitudes  $3P$ ,  $2P$  respectively have a resultant  $R$ . If the first force be doubled, the magnitude of the resultant is also doubled. Find the angle between the forces.

8. Three forces acting on a particle are in equilibrium. Show that each force is proportional to the sine of the angle between the other two.

Three forces in equilibrium act perpendicularly to the three sides of a triangle  $ABC$ . Show that the forces are proportional to the sides of the triangle.

9. Define a couple and the *moment* of a couple.

If the algebraic sum of the moments of two given coplanar forces about any point in their plane be constant, prove that the given forces form a couple.

Forces equal to 3, 5, 3, and 5 lb. respectively act along the sides of a square taken in order; find their resultant.

10. A straight rod  $AB$  hinged at  $A$  is supported in a horizontal position by a string  $BC$  attached to a point  $C$  vertically above  $A$ . The rod has a weight 20 lb. suspended from  $B$ . If the length of the string be double that of the rod, find the tension of the string and the action at the hinge. Neglect the weight of the rod.

11. Find the centre of gravity of a heavy uniform triangular lamina.

A uniform isosceles triangle has its two equal sides each 5 feet long and its base 8 feet long; find its centre of gravity. If its weight be 5 lb. and a weight of 10 lb. be hung from the vertex, find the centre of gravity of the whole.

12. Describe a common balance with a neat diagram, and write down the requisites of a good balance.

With a balance having unequal arms the weight of a body is found to be 60 lb. on one pan and 72 lb. on the other. Find the true weight of the body correct to two decimal places.

13. State the laws of *limiting friction*.

A weight  $W$  rests in equilibrium on a rough inclined plane being just on the point of slipping down. On applying a force  $W$  parallel to the plane the weight is just on the point of moving up. Find the angle of the plane and the coefficient of friction.

14. What is *power* of an agent doing work, and how is it measured?

The Darjeeling mail has a maximum speed of 60 miles per hour. If the total resistance then be the weight of 1 ton, find the horse-power of the engine.

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*All questions are of equal value. Attempt six questions, of which at  
 least two must be from each of the GROUPS A and B  
 and one from GROUP C.*

## GROUP A

1. State the laws of a simple pendulum, and explain how they are verified.

A pendulum of length  $l$  loses 5 secs. in a day. By how much must it be shortened to keep correct time?

2. Describe a hydrostatic balance, and explain clearly the principle on which the working of the instrument is based.

Given a body  $A$  which weighs 7.55 gm. in air, 5.17 gm. in water and 6.85 gm. in another liquid  $B$ , calculate from these data the density of the body  $A$  and that of the liquid  $B$ .

3. Define 'kinetic energy' and 'potential energy.' Give an example of each.

A body is falling freely under gravity, show that the sum total of its energy is always constant.

4. State 'Hooke's Law' and define 'Young's Modulus of Elasticity.' How would you determine 'Young's Modulus' for a steel wire?

### GROUP B

5. Explain the construction of a mercurial thermometer, and state how it is graduated.

What is meant by 'absolute temperature'? Find the value of the absolute zero on the Fahrenheit scale.

6. Distinguish between saturated and unsaturated vapours.

Explain how the maximum tension of aqueous vapour is determined at temperatures below and above the normal boiling point of water.

Explain the formation of clouds.

7. Explain how heat is propagated through a given body by conduction, and define 'coefficient of conductivity'.

The coefficient of conduction of copper is 0.96; how many heat units will pass per minute across a plate of copper one metre long, one metre broad, and one centimetre thick, when its opposite faces are kept at temperatures differing by ten degrees centigrade?

8. Describe the Steam Engine with the help of a neat diagram, and explain its action.

### GROUP C

9. Explain how the velocity of sound in air is accurately determined and reduced to normal temperature and pressure. What is its value?

10. Describe a phonograph and explain its action.

11. What do you mean by the 'pitch' of a musical note? Mention any three methods for determining it, and describe one of them fully.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*All questions are of equal value. Attempt six questions, of which at least two must be from each of the GROUPS A and C and one from GROUP B.*

### GROUP A

1. Describe Rømer's method for determining the velocity of light. What is its value?

2. A candle flame is viewed through (a) a prism, (b) a parallel-sided plate of glass. Explain, with the aid of neat diagrams, the apparent positions of the candle as seen by the eye.

Why do the edges of the candle appear coloured in one case and not in the other?

The minimum deviation produced by a hollow prism filled with a certain liquid is  $30^\circ$ ; if the refracting angle of the prism is  $60^\circ$ , what is the index of refraction of the liquid?

3. What are the two principal defects of vision? Explain how they are rectified with the help of spectacles.

A short-sighted man can read printed matter distinctly when it is held at 15 cm from his eyes; find the focal length of the glasses which he must use if he wishes to read with ease a book at a distance of 60 cm.

4. Write short notes on the following :—(a) complementary colours, (b) phosphorescence, (c) Fraunhofer lines, (d) total reflection.

### GROUP B

5. What is an electron? Explain with its help the phenomenon of electrification by friction or by induction.

Two spheres, of 2 and 6 cm. radius, are charged respectively with eighty and thirty units of electricity; compare their potentials. If they are connected by a fine wire, how much electricity will pass along it?

6. Describe the construction and explain the action of an electrophorus. How would you use it to charge an electroscope (a) positively, (b) negatively?

Show how any amount of charge can be drawn from the electrophorus, when once excited, without violating the principle of conservation of energy.

7. Define the magnetic moment of a magnet. Find an expression for the moment of the couple acting on a magnet placed in the Earth's horizontal magnetic field when it is deflected through an angle  $\theta$  from the magnetic meridian.

A magnet 8 cm. in length lies in a field of intensity  $H=0.18$ , and the strength of each of its poles is 5. Find the moment of the couple required to deflect it at right angles to the magnetic meridian.

### GROUP C

8. Describe a suspended-coil type of galvanometer and explain its action.

A Daniell cell is connected up in series with a tangent galvanometer of 1 ohm resistance, and a box of resistance coils. When a resistance of 2 ohms is taken out of the box, the deflexion of the galvanometer is  $60^\circ$ ; and when the resistance in the box is increased to 20 ohms the deflexion falls to  $30^\circ$ . Find the resistance of the cell.

9. Describe an electric glow lamp. Why does the filament of the lamp become hot while the wires leading to it remain comparatively cold?

An electric lamp is marked 40 watts, 200 volts. Explain these terms. What will be the strength of the current passing through its filament?

The current consumption of such a lamp is one unit in 25 hours. Comment on the statement.

10. Explain the construction of an electro-magnet, and describe briefly any two instruments whose action depends on it.

11. Give a brief account of the following :—(a) a thermopile, (b) a voltmeter, (c) an ammeter.

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any six questions, of which Question 8 must be one, carry full marks*

*The questions are of equal value*

1. When a candle is lighted a flame is produced, and it gradually diminishes in size. Explain how the flame is produced and what happens to the candle. Describe experiments supporting your statement.

2. Explain the following with illustrations :—(a) equivalent weight, (b) atomic weight, (c) a molecule, (d) an acid, (e) a base.

3. In what different forms do sodium chloride and sulphur (free and combined) occur in nature? Give the common names of the more important of

the sulphur compounds occurring in nature and their formulae as far as possible. Which of these are to be found in India?

4. Explain with equations what happens when—(a) gaseous chlorine is led into an aqueous solution of ammonia, (b) a solution of hydrogen peroxide is poured into a solution of potassium iodide, (c) gaseous sulphuretted hydrogen is passed through an acidified solution of copper sulphate, (d) marsh gas and chlorine are enclosed in a tube standing over mercury in a trough.

5. What is coal gas? Explain with a neat sketch how coal gas is manufactured. Mention some of the most important by-products of this industry and their uses.

6. How is ozone prepared in the laboratory? How do you arrive at its chemical formula?

7. Name three indicators and write notes on their use and suitability in ascertaining the neutralization of acids and bases.

8. A gram atom of magnesium and an excess of sulphuric acid were enclosed in a stout cylinder of total internal volume 1.2 litres. The metal and the acid occupied 250.8 c.c. The prevailing temperature was 23°C. and the pressure 756 mm. What would be the pressure inside the cylinder when all the magnesium has been used up and the system brought down to the prevailing temperature of 23°C.?

[Change in the volume of the sulphuric acid solution with the metal and its vapour pressure may be neglected in the calculation.]

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any six questions of which Question 8 must be one, carry full marks  
The questions are of equal value*

1. What do you understand by the following:—diffusion, sedimentation, ions, positive catalyst, a centinormal solution of calcium chloride?

[The atomic weight of calcium is 40.]

2. How is ethylene prepared in the laboratory? What are the points of difference between ethylene and marsh gas?

3. (a) Discuss the action of chlorine on water under different conditions.

(b) How is potassium chlorate prepared on a large scale? What happens when it is heated?

4. Enumerate the different acids with formulae which contain the sulphur atom. Write short notes on their properties.

5. Describe, with a neat sketch, the contact process of manufacture of sulphuric acid.

6. Mention two important uses of lead and two important compounds containing it that are of commercial value. Describe the properties, preparation, and uses of these two compounds.

7. Briefly describe the Le Blanc process of manufacturing sodium carbonate. What are the uses of sodium carbonate? Is it produced in India?

8. 20 c.c. of a hydrocarbon were exploded with 250 c.c. of air. The immediate contraction was 40 c.c., and the volume of carbon dioxide as found by caustic potash absorption was 20 c.c. What is the composition of the hydrocarbon?

## PHYSIOLOGY

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any FIVE questions*

*All questions carry equal marks*

1. Describe the microscopic appearance of a fibre from a voluntary muscle.
  2. Describe the phenomenon of rigor mortis.
  3. Describe the phenomenon of coagulation of blood.
  4. Describe the different types of joints in the human body and their utility in movement.
  5. Describe the histological structure and chemical composition of blood, and discuss its functions.
  6. What are the different types of food-stuff necessary for the body? Describe the role played by each.
  7. Describe the functions of the liver.
  8. Describe the digestion of food in the small intestines.
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## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any FIVE questions*

*All questions carry equal marks*

1. What is a reflex action? Give a diagram of the reflex arc.
  2. Describe the minute structure of bone.
  3. Describe the structure of the skin.
  4. Describe the mechanical principles of respiration.
  5. Compare the chemical composition of inspired air with that of expired air. How is the change brought about?
  6. Describe the mechanism of the secretion of urine.
  7. What are ductless glands? Name them, and briefly mention the function of each.
  8. Describe the structure of the eye, mentioning the function of the different parts.
-

## GEOGRAPHY

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Only six questions are to be attempted : Question 1 is obligatory*

*The figures in the margin indicate full marks*

1. The following details are quoted from the daily weather report of 20  
 Saturday, the 18th July, 1931 :—

Station . . . . .	Bombay.
Pressure . . . . .	29.71.
Direction of wind . . . . .	WSW.
Humidity . . . . .	90.
Rainfall . . . . .	0.9

Explain the meaning of the figures, and state how they were obtained.

2. Draw a map of central Asia showing the Pamir knot and the chief 16  
 mountain ranges radiating from it. Distinguish between the Siwalik  
 range, the lesser Himalayan range, and the great Himalayan range.

3. Describe all phenomena that characterize a volcanic eruption, and 16  
 explain what is meant by a parasitic cone. What are mud volcanoes, and  
 where do you know them to occur?

4. What is a glacier? Describe the course of a glacier, and state how 16  
 a glacial valley may be distinguished from a river valley. What do you  
 know of the Himalayan glaciers?

5. What is Ferrel's law? What is the general trend of the oceanic 16  
 currents in the two hemispheres, and how is their direction regulated?  
 Give an account of the currents of the Atlantic.

6. What is *cephalic index*? What are the distinctive features of a 16  
 Dravidian, a Veddah, and an Eskimo?

7. Describe any simple method by which you can determine 16  
 approximately the latitude of your college. What is the highest point above  
 the horizon reached by the sun in Calcutta at (a) mid-summer, and (b)  
 mid-winter?

8. State and explain the nature of the rainfall in South Africa, and  
 show how it affects the natural vegetation of the country.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Only six questions are to be attempted : Question 1 is obligatory*

*The figures in the margin indicate full marks*

1. Discuss the comparative values of rivers and mountains as frontiers. 20  
 and illustrate your answer by examples from Asia and Europe.



2. Show how geographical conditions have compelled man to construct different types of dwellings in different places. 16
3. Illustrate the importance of (a) the Suez canal, (b) the Kiel canal, (c) the Panama canal, to different countries. 16
4. Why, and in what ways, is the climate of the Punjab different from that of Malabar? 16
5. Draw a map to show the main railway systems of India, and explain the commercial and political significance of the routes they follow. 18
6. Write an account of the economic geography of (a) Ireland, and (b) Bengal. 16
7. What are the conditions of a good sea-port? Illustrate by examples from Asia. Compare the trade which centres round Bombay with that which centres round Calcutta. 16
8. Draw an outline map of Australia, inserting the boundaries of the different states and the districts where gold is found. Describe the climate and vegetable products of any state. 16
9. Draw a map of India showing the areas specially suitable for the growth of rice, wheat, millet, coconut, cotton, and tea, and note the geographical factors favourable to their growth in the areas where they are abundant.

### BOTANY

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### FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions are to be answered*

*The figures in the margin indicate full marks*

1. What is a branch? Describe the main types of branching. Give neat sketches. 20
2. Explain the difference between the various types of simple and compound leaf. 20

3. What are *adventitious roots*? What is their function? 20
4. What are the chief distinguishing features of the natural order *Gramineae*? 20
5. What are the principal types of tissues found in plants? Where do they occur? 20
6. Explain fully the difference between *Algae* and *Fungi*. Give examples of each. 20
7. What are the chief characteristics of aquatic plants? 20

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## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions are to be answered*

*The figures in the margin indicate full marks*

1. What are *root-hairs*? Where do you find them? What is the function of *root-hairs*? 20
  2. What external conditions are absolutely indispensable for the formation of starch in leaves? Give reasons for your answer. 20
  3. Describe some experiment to prove that the life of a plant cannot be maintained unless water is supplied to the roots. 20
  4. Describe the life-history of *Fern*. 20
  5. What are *vessels* and *tracheids*? Describe the principal forms of vessels. 20
  6. Describe the inflorescence in the Natural Order *Compositae*. 20
  7. Give the characteristic features of the Natural Order *Leguminosae*. 20
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# B.A. Examination, 1932

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## ENGLISH—HONOURS

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	{	„ J. W. HOLME, M.A.
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### FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Attempt the LAST TWO questions and any THREE more*

1. Write a critical note on the handling of the supernatural in *Macbeth* and *The Tempest*. 16
2. Is it correct to hold that 'Macbeth and Lady Macbeth remain to the end tragic, even grand'? 16
3. 'Shakespeare's *Tempest* reveals the soul of things beneath the surface of conventions.' Discuss. 16
4. Either, 'Macbeth stands in contrast throughout with *Hamlet*.' Illustrate. 16  
Or, Contrast the character of Macbeth with that of any other Shakespearean hero. 16
5. Give a complete character analysis of the 'courtgroup' in *The Tempest*. 16
6. Either, Which of the seven longer narrative poems in your text do you consider to be the best in point of (a) narrative power and skill, and (b) poetic suggestiveness? 16  
Or, In which of these seven pieces are the human figures made 'to live and breathe out of their own desire and necessity'?

7. Explain clearly with reference of the context, adding notes where necessary, any six of the following :— 36

- (a) Ay, sir; there are a crew of wretched souls  
That stay his cure : their malady convinces  
The great assay of art; but at his touch,  
Such sanctity hath heaven given his hand,  
They presently amend.
- (b) He has no children. All my pretty ones?  
Did you say all? O hell-kite! All?  
What, all my pretty chickens and their dam  
At one fell swoop?
- (c) Time, thou anticipatest my dread exploits :  
The flighty purpose never is o'ertook  
Unless the deed go with it : from this moment  
The very firstlings of my heart shall be  
The firstlings of my hand.
- (d) O, out of that 'no hope'  
What great hope have you! no hope that way is.  
Another way so high a hope that even  
Ambition cannot pierce a wink beyond,  
But doubt discovery there.
- (e) O, what might?—No more :—  
And yet methinks I see it in thy face,  
What thou shouldst be : the occasion speaks thee, and  
My strong imagination sees a crown  
Dropping upon thy head.
- (f) 'To have simply held the tongue were a task for a boy or girl,  
And here were Muleykch again, the eyed like an antelope,  
The child of his heart by day, the wife of his breast by night'—  
'And the beaten in speed;' wept Hoseyn; 'you never have loved  
my Pearl.'
- (g) But ere he stood  
The evil thing of brass and wood  
Up to his ear the notches drew;  
And clanging forth the arrow flew,  
And midmost of the carbuncle  
Clanging again, the forked barbs fell,  
And all was dark as pitch straightway.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Discuss any one of the following quotations, illustrating your answer by references to your text :— 18

(a) 'Burke is an authority for all times. He is in the political what Shakespeare is in the moral world.'

(b) 'Burke recognizes the profound truth that politics is not a science of abstract ideas but an empirical art with morality for its standard.'

2. Explain any *two* of the following, stating clearly in what connexion Burke applies them :— 14

- (a) Partial freedom seems to me a most invidious mode of slavery.
- (b) The table of the House of Commons will glut them, let their appetite for expense be never so keen.
- (c) It would have been a poor compensation that we had triumphed in a dispute, whilst we lost an empire.

3. Either, Indicate carefully the qualities which in your opinion make any *two* of the following essays specimens of genuine literature :—*The Mouse* (Robert Lynd); *Apple Blossoms and a Lost Village* (W. H. Hudson); *Night and Moonlight* (Henry Thoreau). 20

Or, What, in your opinion, are the characteristics of Lamb as an essayist? Illustrate your answer with reference to the text

4. Explain, with reference to the context, any *two* of the following :— 12

(a) I skulked in my favourite wilderness like a Cameronian of the Killing Time, and John Todd was my Claverhouse and his dogs my questing dragoons.

(b) A horse with a man's brain would be a great racer, and the sons of Ixion, may be, were such.

(c) Good-morrow to my Valentine, sings poor Ophelia; and no better wish but, with better auspices, we wish to all faithful lovers who are content to rank themselves humble diocesans of old Bishop Valentine and his true church.

5. Either, Characterize the hero of Edwin Pugh's story *The man who was Blind*. Does its interest lie in the plot or in the characterization, or in both? Give reasons for your answer. 20

Or, Show how Dion Clayton Calthorp's *Sheep Sleep* stands in a class by itself. What characteristics of the short story does it show? Discuss its literary qualities.

6. Either, What is your opinion regarding the statement that in the growth of the Christian church, the most important element is the expansion of ideas, and that the epistles reflect this advance? Give reasons for your answer, with references to the text. 16

Or, The Bible has been called not so much a book as a library of varied literature. Discuss this statement, with special reference to your text.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay on *one* of the following subjects :— 50

- (a) We must be free or die, who speak the tongue that Shakespeare spake; the faith and morals hold Which Milton held.
- (b) The inventions, not yet made, which you think would be of most use to the world.
- (c) Literature as a factor of unity among races and nations
- (d) Humour in literature
- (e) Democracy assumes a far higher level of good sense, judgement, honest purpose, devotion to the public welfare in the citizen of a free country, than is either looked for or needed in the subjects of a despotic monarchy.

2. Give the substance of *one* of the following poems :—

25

(a) One lesson, Nature, let me learn of thee—  
 One lesson that in every wind is blown,  
 One lesson of two duties serve in one.  
 Though the loud world proclaim their enmity—  
 Of Toil unsever'd from Tranquillity :  
 Of Labour, that in lasting fruit outgrows  
 Far noisier schemes, accomplish'd in Repose,  
 Too great for haste, too high for rivalry.  
 Yes, while on earth a thousand discords ring  
 Man's senseless uproar mingling with his toil,  
 Still, do thy quiet ministers move on,  
 Their glorious tasks in silence perfecting ;  
 Still working, blurring still our vain turmoil ;  
 Labourers that shall not fail, when man is gone.

(b) You ask me, why, tho' ill at ease,  
 Within this region I subsist,  
 Whose spirits totter in the mist,  
 And languish for the purple seas?  
 It is the land that freedom till,  
 That sober suited Freedom chose,  
 The land, where gift with friend or foes  
 A man may speak the thing he will ;  
 A land of settled government,  
 A land of just and old renown,  
 Where Freedom slowly broadens down  
 From precedent to precedent :  
 Should banded unions persecute  
 Opinion, and induce a time  
 When single thought is civil crime,  
 And individual freedom mute ;  
 Tho' Power should make from land to land  
 The name of Britain trebly great—  
 Tho' every channel of the State  
 Should almost choke with golden sand—  
 Yet waft me from the harbour-mouth,  
 Wild wind ! I seek a warmer sky,  
 And I will see before I die  
 The palms and temples of the South.

3. Give in your own words the substance of *one* of the following passages :— 25

(a) Let the Past perish !—let darkness shroud it !—let it sleep for ever the crumbling temples and desolate tombs of its forgotten sons,—if it cannot afford us, from its disburied secrets, a guide for the Present and the Future. What, my Lords ye have thought that it was for the sake of antiquity alone that we have wasted our nights and days in studying what antiquity can teach us ! You are mistaken ; it is nothing to know what we have been, unless it is with the desire of knowing that which we ought to be. Our ancestors are mere dust and ashes, save when they speak to our posterity ; and then their voices resound, not from the earth below, but the heaven above. There is an eloquence in Memory, because it is the nurse of hope. There is a sanctity in the Past, but only because of the chronicles it retains,—chronicles of the progress of mankind,—stepping-stones in civilization, in liberty, and in knowledge. Our fathers forbid us to recede,—they teach us what is our rightful heritage,—they bid us reclaim, they bid us augment, that heritage,—preserve their virtues, and avoid their errors. These are the true uses of the Past. Like the sacred edifice in which we are,—it is a tomb upon which to rear a temple.

(b) The aristocracy of the spirit is the only aristocracy in the world worth having for any man may enter it. But it can only be worth having and worth entering if it exacts the highest from itself. If it is to disregard, as it must, alien attributes such as wealth and popular esteem, it must replace these by titles more arduous. In order that it may have the strength to refuse to compromise without, it must refuse to compromise within. To wink at any defection from its own standards, to tolerate slovenly thought or meretricious art, to admit for one single moment that the republic of the spirit is a place of licence because it is largely screened from the public eye, to forget that the rejection of the standard of the market-place is justified only by the acceptance of a far sterner morality—is to have forfeited the claim to present respect and ultimate allegiance.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Answer Questions 1 and 2, and FOUR others*

1. Explain, with reference to the context, any *three* of the following 15 passages, adding notes where necessary :—

(a) O! but they say the tongues of dying men  
Enforce attention like deep harmony :  
Where words are scarce, they are seldom spent in vain,  
For they breathe truth that breathe their words in pain.

(b) Mine eyes are full of tears, I cannot see :  
And yet salt water blinds them not so much  
But they can see a sort of traitors here.

(c) Yet from those flames  
No light, but rather darkness visible  
Served only to discover sights of woe,  
Regions of sorrow, doleful shades, where peace  
And rest can never dwell

(d) She guessed not how  
Her darling one wish would be heard.  
And thus we sit together now,  
And all night long we have not stirred,  
And yet God has not said a word !

(e) And not by the eastern windows only,  
When daylight comes, comes in the light,  
In front, the sun climbs slow, how slowly,  
But westward, look, the land is bright !

(f) Anon they move  
In perfect phalanx to the Dorian mood  
Of flutes and soft recorders ; such as raised  
To highth of noblest temper heroes old  
Arming to battle.

2. Compare Dryden and Pope *either* as satirists, or as writers of 15 heroic couplet.

3. *Either*, Discuss, with illustrative references, Milton's use of simile. 15  
*Or*, Discuss fully, with special reference to Book I, the statement that '*Paradise Lost* is great in theme, in style, and in attainment'. What are the special difficulties of Milton's theme in *Paradise Lost*?

4. 'Who can think of Arnold's poetry as a whole without feeling that Nature is always behind it as a living background?' Discuss with reference to the *Scholar-Gipsy*. 15

5. Do you agree with the view that Browning is a thinker rather than a poet? Illustrate your answer by quoting from or referring to the poems which you have read. 15

6. *Either*, What impressions do you gather from the poems of Burns 15  
 you have read concerning his character as a man and as a poet?

*Or*, What ideas about the relation of art to life does Tennyson express in the *Lady of Shalott* and *The Lotus-Eaters*?

7. *Either*, Discuss, with special reference to *Richard II*, Shakes- 15  
 peare's debt to Marlowe in connexion with the Chronicle Play. What outstanding improvements, if any, did he make on the model set by his predecessor?

*Or*, Discuss the statement that *Richard II* is far more a lyric than a drama.

8. Compare the characters of Bolingbroke and Richard II. 15

9. Give in your own words the substance of one of the following 25  
 poems :—

(a) Bless love and hope. Full many a withered year  
 Whirled past us, eddying ; to its chill doomsday ;  
 And clasped together where the blown leaves lay,  
 We long have knelt and wept full many a tear.  
 Yet lo ! one hour at last, the Spring's compeer,  
 Flutes softly to us from some green byeway :  
 'Those years, those tears are dead, but only they :—  
 Bless love and hope, true soul ; for we are here.  
 Cling heart to heart ; nor of this hour demand  
 Whether in very truth, when we are dead,  
 Our hearts shall wake to know Love's golden head  
 Sole sunshine of the imperishable land,  
 Or but discern through night's unfettered scope,  
 Scorn-fired at length the illusive eyes of Hope.

(b) For lo ! creation's self is one great choir,  
 And what is nature's order but the rhyme  
 Whereto in holiest unanimity  
 All things with all things move unfalteringly,  
 Infolded and communal from their prime ?  
 Who shall expound the mystery of the lyre ?  
 In far retreats of elemental mind  
 Obscurely comes and goes  
 The imperative breath of song, that as the wind  
 Is trackless, and oblivious whence it blows.  
 Demand of lilies wherefore they are white,  
 Extort her crimson secret from the rose,  
 But ask not of the Muse that she disclose  
 The meaning of the riddle of her might :  
 Somewhat of all things sealed and recondite,  
 Save the enigma of herself, she knows.



## FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Candidates should answer Questions 1 and 6 and THREE others*

*The figures in the margin indicate full marks*

1. Explain with reference to the context, four of the following passages :— 24

(a) In Arcadia still, but kings; the ferule of their sway not much harsher, but of like dignity with that mild sceptre attributed to King Basileus; the Greek and Latin, their stately Pamela and their Philoclea; with the occasional duncery of son & untoward tyro, serving for a refreshing interlude of a Mopsa, or a clown Damocetas !

(b) The grand work of literary genius is a work of synthesis and exposition, not of analysis and discovery; its gift lies in the faculty of being happily inspired by a certain intellectual and spiritual atmosphere, by a certain order of ideas, when it finds itself in them; of dealing divinely with these ideas, presenting them in the most effective and attractive combinations.

(c) It loves and admires neither the legislation of middle-class Parliaments, nor the local self-government of middle-class vestries, nor the unrestricted competition of middle-class industrialists, nor the dissidence of middle-class Dissent and the Protestantism of middle-class Protestant religion.

(d) That the author of the *Religio Medici* mounted upon the airy stilts of abstraction, conversant about notional and conjectural essences; in whose categories of Being the possible took the upper hand of the actual; should have overlooked the impertinent individualities of such poor concretions as mankind, is not much to be admired

(e) The standard of *police* is the measure of *political justice*. The atmosphere will blight it; it cannot live here. It has got into moral world, where it has no business, from which it must needs fall headlong; as dizzy, and incapable of making a stand, as a Swedenborgian bad spirit that has wandered unawares into the sphere of one of his Good Men, or Angels.

(f) To what does he owe this supreme distinction? To nature first and foremost, to that bent of nature for inequality which to the worshippers of the average man is so unacceptable; to a gift, a divine favour. 'The older one grows,' says Goethe, 'the more one prizes natural gifts, because by no possibility can they be procured or stuck on.'

2. *Either*, 'Few writers have understood so fully as Lamb the inter-twining of ludicrous and pathetic elements in human nature.' Discuss. 17

*Or*, Discuss the autobiographical element in the Essays of Lamb you have read. 17

3. Write a short essay on Lamb's debts to seventeenth-century prose. 17

4. *Either*, 'The habit of judging poets rather by their fitness as models for the young, than by what is personal and incommunicable in them, was strong in Matthew Arnold.' 17

Discuss in the light of this quotation Arnold's merits and limitations as a literary critic.

*Or*, Attempt an estimate of Arnold as a master of the art of persuasion. 17

5. 'The observations of a well-informed scholar do not, unless that scholar possesses the essayist's intangible gift, make an essay when all is said and done.' 17

Does Matthew Arnold possess this intangible gift of the essayist?

6. Give the substance of *one* of the following passages :—

25

(a) Knowledge is capable of being its own end. Such is the constitution of the human mind, that any kind of knowledge, if it be really such, is its own reward. And if this is true of all knowledge, it is true also of that special Philosophy, which I have made to consist in a comprehensive view of truth in all its branches, of the relations of science to science, of their mutual bearings, and their respective values. What the worth of such an acquirement is, compared with other objects which we seek—wealth or power or honour or the conveniences and comforts of life—I do not profess here to discuss; but I would maintain, and mean to show, that it is an object, in its own nature so really and undeniably good, as to be the compensation of a great deal of thought in the compassing, and a great deal of trouble in the attaining.

Now when I say that knowledge is, not merely a means to something beyond it, or the preliminary of certain arts into which it naturally resolves, but an end sufficient to rest and to pursue for its own sake, surely I am uttering no paradox, for I am stating what is both intelligible in itself, and has ever been the common judgement of philosophers and the ordinary feeling of mankind. I am stating what at least the public opinion of this day ought to be slow to deny, considering how much we have heard of late years, in opposition to religion, of entertaining, curious, and various knowledge. I am but saying what whole volumes have been written to illustrate, viz., by a 'selection from the records of Philosophy, Literature, and Art, in all ages and countries, of a body of examples to show how the most unpropitious circumstances have been unable to conquer an ardent desire for the acquisition of knowledge.'

(b) Matthew Arnold was a profoundly troubled man. He had no belief; he was honest enough not to disguise from himself that he had none; and he was serious enough to know by bitter experience that it is hard indeed to live without a belief. His loyalty to his own dignity as a human being kept him from seeking self-oblivion by a mere excess of blind activity in a society whose spirit seemed to him dead and its motives sordid. Yet, though he tried, he could not find in our self that inward confidence of soul which alone, as he well knew, would enable him to stand firm in isolation. A deep disbelief in the world call for a correspondingly deep belief in oneself. This Matthew Arnold could not achieve. It seemed to him that he could never possess his soul. Somewhere in the depths of himself, he believed, was concealed the truth of his own being, a life and a law of life indefeasibly his; but he could not make contact with them, save in fitful moments of which neither the influence nor even the memory endured. And he felt that he was like a ship whose compass had been demagnetized before the voyage of life began. The needle did not point steadily to the north; and the courses steered were erratic and contradictory.

To be oneself, to possess one's own soul—this, Arnold knew, was the necessity; if this could be achieved, belief was achieved and an end of perturbation. But, through some hidden weakness, the way could not be found, the discovery could not be made. The water would not flow from the living rock at the bidding of his resolve. And slowly and steadily his creative impulse withered, because he could not strike the source of life within himself.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

SIX questions only to be attempted, THREE from GROUP I and THREE from GROUP II

## GROUP I: HISTORY OF ENGLISH LITERATURE

*(Answer Question 1 and two others from this group)*

1. *Either*, Write brief notes on six of the following works, mentioning their importance in the history of English literature :—*The Fight at Finburgh, The Old English Chronicle, Layamon's Brut, Malory's Morte D'Arthur, The Mirror for Magistrates, Euphues, The Authorized Version of the Bible, Robinson Crusoe, The Beggar's Opera, Percy's Reliques of English Poetry, Macpherson's Ossian, Tom Jones, Prometheus Bound, The Pickwick Papers* 18

*Or*, Discuss in brief the position in English literature of three of the following writers :—King Alfred the Great, John Wyclif, William Langland, George Chapman, John Lyly, Sir Francis Bacon, Joseph Addison, John Keats, Lord Tennyson, William Morris.

2. *Either*, Give a brief general survey of the form and contents of Old English heroic poetry. How far did Christianity influence this side of Old English literature ? 16

*Or*, Discuss in brief the extent and nature of Old English reflective poetry.

3. *Either*, Give a short account of the various types of romance found in Middle English literature, indicating their sources and their treatment in English, and mentioning the names of the more important works and their authors up to the time of Chaucer. 16

*Or*, Write a short estimate of the work and achievements of Chaucer.

4. *Either*, Briefly discuss the influence exerted by the Renaissance upon English literature 16

*Or*, Write a brief sketch of the origin of the English drama and its early history up to A.D. 1600.

5. *Either*, Indicate the general trend of English literature in the eighteenth century as typified by the works of Addison and Swift, Pope and Johnson, and Goldsmith and the novelists. What new tendencies are noticeable in the works of some of the writers during this century, and who were these writers ? 16

*Or*, Give a short history of the English novel in the eighteenth century, incidentally touching upon its origins.

6. Give a brief critical appreciation of *either* Milton *or* Scott. 16

## GROUP II: ENGLISH PHILOLOGY

*(Answer Question 1 and two others from this group)*

1. *Either*, Write philological notes on six of the following words and expressions : *church, gossip, saunter, since, trusteeship, not, heart of hearts, doeth, riches, puny, island, mob.* 18

*Or*, Discuss three of the following :—*hybridism, journalese, quasi-classical words, the affix -ing, prudery in language, pronoun of courtesy consonant shift, speech mixture.*

2. Discuss the nature of the English accent. 16
3. Estimate, in brief, the nature and extent of the influence exerted by Scandinavian upon English. 16
4. *Either*, Write a short historical study of the French element in English. 16
- Or, Discuss whether the large proportion of Latin words in the English language has been on the whole beneficial or otherwise to the language.
5. Trace the history of the genitive case and of the plural forms in the declension of the English noun. 16
6. *Either*, Discuss briefly *two* of the following :— 16
- The tenses of the English verb—their origin.
  - Poetic words.
  - Similar forms for both verb and noun.
  - Saxon words and French synonyms.
  - Th* and *s* in the verb.

Or, Write a short essay on the vocabulary of Shakespeare.

## ENGLISH—PASS

*Chairman*—PROF. JNANRANJAN BANERJEA, M.A., B.L.

### FIRST PAPER

Examiners—	{	MR. PRIYANATH CHATTERJEE, M.A.
		„ SURESHCHANDRA RAY, M.A.
		„ AMULYACHANDRA AIKAT, M.A.
		„ NALINIMOHAN CHATTERJEE, M.A.
		„ KUMUDEANDHU RAY, M.A.
		„ ABINASCHANDRA BOSE, M.A.
		MRS. RAJKUMARI DAS, M.A.
{	MR. ASUTOSH CHATTERJEE, M.A.	
	„ SURESCHANDRA SENGUPTA, M.A.	

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Write a short essay on your favourite poet in *The Longer Narrative Poems*, giving full reasons for your preference and quoting from, or referring to, the poems you have read. 14
- Or, Illustrate Tennyson's feeling for the Unseen, and Morris's feeling for the Middle Ages.
2. Discuss, with special reference to *Macbeth*, ONE of the following statements :— 14
- 'Shakespeare's conception of tragedy involved, over and above character, the suggestion of fatal forces, operating on the actions of mankind.'
  - 'Death is of small account in Shakespeare's scheme of tragic values.'
3. *Either*, What part is played by Banquo or Macduff in developing the plot of *Macbeth*? 14
- Or, Write a critical note on the lyrical element in *The Tempest*.

4. *Either*, Write a short essay on Shakespeare's use of the supernatural in *Macbeth* and *The Tempest* 14  
*Or*, Compare the characters of Caliban and Ariel.

5. Elucidate the statement of Coleridge *either* that '*The Tempest* addresses itself entirely to the imaginative faculty', *or* that 'the atmosphere of farewell hangs over *The Tempest*'. 14

6. Explain, with reference to the context, any five of the following passages, adding notes where necessary :— 30

(a) Things without all remedy  
 Should be without regard : what's done is done.

(b) 'Who's there, i' the name of Beelzebub? Here's a farmer that hanged himself on the expectation of plenty : come in time ; have napkins enow about you ; here you'll sweat for't.

(c) A living drollery. Now I will believe  
 That there are unicorns ; that in Arabia  
 There is one tree, the phoenix' throne ; one phoenix  
 At his hour reigning there.

(d) You were kneel'd to and importuned otherwise  
 By all of us, and the fair soul herself  
 Weigh'd between loathness and obedience, at  
 Which end o' the beam should bow.

(e) But by mine eyes and by mine ears I swear,  
 I will be deafier than the blue eyed cat,  
 And thrice as blind as any noonday owl,  
 To holy virgins in their vestalies,  
 Henceforward.

(f) And for awhile did he forget  
 The longings that had brought him there  
 In wondering at these marvels fair ;  
 And still for fear he doubted much  
 One jewel of their robes to touch

## SECOND PAPER

	(	MR. RAMPADA MAJUMDAR, M.A.
		DR SURENDRACHANDRA GUPTA, M.A., PH.D.(LOND.).
		MR. SUHASCHANDRA RAY, M.A.
Examiners—	}	.. GOPALCHANDRA MAITRA, M.A.
		.. JYOTISCHANDRA MITRA, M.A.
		.. CHANDICHARAN MITRA, M.A.
		.. MANJUGOPAL BHATTACHARYYA, M.A.
		.. GIRIJASANKAR BHATTACHARYYA, M.A.
		.. NARENDRANATH CHATTERJEE, M.A.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Write a short note on Burke as a practical politician, illustrating your answer by reference to his remarks on civil freedom and his defence of party. 16

Or, Explain any *two* of the following remarks, showing clearly how Burke applies them :—

(a) Other laws may injure the community, this (partial suspension of the *Habeas Corpus* Act) dissolves it.

(b) General rebellions and revolts of a whole people never were encouraged, now or any time. They are always provoked.

(c) Nothing in progression can rest on its original plan.

2. Elucidate any *two* of the following extracts, adding notes where necessary :— 16

(a) Our subjects diminish as our laws increase.

(b) They have all the merit of volunteers, without risk of person or charge of contribution.

(c) He that accuses all mankind of corruption ought to remember that he is sure to convict only one.

3. Either, What differences do you notice between the characters of Goldsmith and those of Charles Lamb or Robert Louis Stevenson? How do you explain this? Illustrate your answer by references to your text. 18

Or, Characterize the humour of Dr. Johnson as evidenced in his *Inspiration of a Garret*.

4. Explain, with reference to the context, any *two* of the following :— 14

(a) My grandmother appears as if she stood in a large drum, whereas the ladies now walk as if they were in a go-cart.

(b) The smuggest of suburban hearthrugs is a cross-road between Delphi and Thebes and the homeliest of tabbies a sphinx who defies you.

(c) Do thou lend thine ear, Fielding, thou whom the great Richardson did accuse of vulgarity because thou didst discern natural gentility in a footman and yet was not to be taken in by the airs of Pamela and my Lady G.

5. Either, Compare W. W. Jacobs's *False Colours* with C. E. Montague's *A Propos des Bottes* as examples of the humorous short story. 20

Or, Give the plot of E. V. Lucas's *The face in the Wall*. Does it in your opinion differ from the ordinary run of short stories, and if so, in what respect? Give reasons for your answer.

6. Either, State what you know about St. Paul's experiences at Athens and Ephesus. 16

Or, How does St. Paul define faith? Illustrate after him the wonders of this Christian virtue.

### THIRD PAPER

MR. RAMAPRASAD MOOKERJEE, M.A., B.L.

REV. J. N. RAWSON, B.Sc., B.D.

SIR ABDULLA-AL-MAMUN SUHRAWARDY, KT., M.A.,  
D.LITT., PH.D.

MR. JYOTISCHANDRA BANERJEE, M.A.

Examiners— { „ MOHINIMOHAN BHATTACHARYYA, M.A.  
„ NARENDRANATH CHAKRABARTI, M.A.  
„ NRIPENDRACHANDRA BANERJEE, M.A.  
„ SYAMACHARAN MUKHERJEE, M.A.  
„ SARATCHANDRA GUPTA, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Give the substance of one of the following passages :

25

(a) Prose is the achievement of civilization, of people who have learned to discuss without blows or invective, who know that truth is hard to find and worth finding, who do not begin by accusing an opponent of wickedness, but elicit reason and patience by displaying them. You cannot say in poetry what the best prose says, or accomplish what the best prose accomplishes. Civilization may not surpass a primitive society in heights of rapture or heroism, but it is, if it be civilization, better for everyday life, kinder, more rational, more sustained in effort; and this kindness and reason and sustained effort are expressed and encouraged in the masterpieces of prose. The French understood this long ago, because they prize civilization and enjoy it. Pascal, the French thinker, writing his *Provincial Letters* in 1656 upon a subject obscured by medieval subtleties and distorted by party passions, is already just, polite, and lucid; he does not even affect the magnificent disdain of Gibbon, the English historian, but is a civilized man talking to other civilized men, and therefore all the more deadly in debate. But it is fallacies that he would kill, not those who maintain them. He knows that the art of controversy is, not to begin with invective, but to state your case in such a way that those who like invective will supply it themselves against your adversary. Though he is not clothed in shining armour, he fights for the children of light in all ages with no pretence of being an angel or a dervish, but quietly appealing to the everlasting reason from whence comes his help.

(b) Thought and speech are inseparable from each other. Matter and expression are parts of one: style is a thinking out into language. This is what is called *literature*; not *things*, not the verbal symbol of things; not, on the other hand, mere *words*; but thoughts expressed in language. Call to mind the meaning of the Greek word which expresses the special prerogative of man over the feeble intelligence of the inferior animals. It is called *Logos*: what does *Logos* mean? it stands for both *reason* and for *speech*, and it is difficult to say which it means more properly. It means both at once: why? because really they cannot be divided,—because they are in a true sense one. When we can separate light and illumination, life and motion, the convex and the concave of a curve, then will it be possible for thought to tread speech under foot, and to hope to do without it—then will it be conceivable that the vigorous and fertile intellect should renounce its own double, its instrument of expression, and the channel of its speculations and emotions.

There are some critics who consider fine writing to be an *addition from without* to the matter treated of—a sort of ornament superinduced, or a luxury indulged in, by those who have time and inclination for such vanities. They speak as if *one* man could do the thought, and *another* the style. With them, 'fine writing' is a trick and a trade, and language is but the hired servant of reason. But can we really think that Homer, or Pindar, or Shakespeare, or Walter Scott, were accustomed to aim at diction for its own sake, instead of being inspired with their subject, and pouring forth beautiful words because they had beautiful thoughts? The elocution of a great intellect is great: his language expresses, not only his great thoughts, but his great self.

2. Give the substance of *one* of the following poems :—

25

- (a) When God at first made man,  
 Having a glass of blessings standing by ;  
 Let us (said He) pour on him all we can :  
 Let the world's riches, which dispersed lie,  
 Contract into a span.  
 So strength first made a way ;  
 Then beauty flow'd, then wisdom, honour, pleasure :  
 When almost all was out, God made a stay,  
 Perceiving that alone, of all His treasure,  
 Rest in the bottom lay.  
 For if I should (said He)  
 Bestow this jewel also on my creature,  
 He would adore my gifts instead of me,  
 And rest in Nature, not the God of Nature :  
 So both should losers be.  
 Yet let him keep the rest,  
 But keep them with repining restlessness :  
 Let him be rich and weary, that at least,  
 If goodness lead him not, yet weariness  
 May toss him to my breast.

- (b) We are the music-makers  
 And we are the dreamers of dreams,  
 Wandering by lone sea-breakers,  
 And sitting by desolate streams ;  
 World-losers and world-forsakers,  
 On whom the pale moon gleams :  
 Yet we are the movers and shakers  
 Of the world for ever, it seems.  
 With wonderful deathless ditties  
 We build up the world's great cities,  
 And out of a fabulous story  
 We fashion an empire's glory :  
 One man, with a dream, at pleasure,  
 Shall go forth and conquer a crown ;  
 And three with a new song's measure  
 Can trample a kingdom down.  
 We, in the ages lying  
 In the buried past of the earth,  
 Built Nineveh with our sighing,  
 And Babel itself in our mirth ;  
 And o'erthrew them with prophesying  
 To the old of the new world's worth ;  
 For each age is a dream that is dying,  
 Or one that is coming to birth.

3. Write an essay on *one* of the following subjects :—

50

- (a) Flattery as a Fine Art.  
 (b) The Pleasures of Fiction.  
 (c) The Conquest of the Air.  
 (d) The Autobiography of a Rupee.  
 (e) The Languages of India and the Indian Nation.  
 (f) Stamp-Collecting (or Coin-Collecting).



## BENGALI VERNACULAR

*Paper-Setters*—{ PROF. DINESCHANDRA SEN, RAI BAHADUR, B.A.,  
D.LITT.  
,, SURENDRANATH DASGUPTA.

*Head Examiner*—PROF. DINESCHANDRA SEN, B.A., D.LITT.

*Examiners*—{ MR. WAJED ALI, BARRISTER-AT-LAW.  
,, BARINDRAKUMAR GHOSH.  
RAY SAHIB JAGADANANDA RAY.  
,, GOBINDANATH GUHA, M.A.  
,, PURNACHANDRA DE, B.A.  
,, BASANTARANJAN RAY.  
,, GURUBANDHU BHATTACHARYA, B.A., B.T.  
,, NIKHILNATH RAY, B.L.  
,, MANMATHAMOHAN BASU, M.A.  
MAULVI ABDUL KARIM.  
MR. KALIDAS RAY, B.A.  
,, DINABANDHU MAJUMDAR, M.A.  
,, KUMUDRANJAN MALIK, B.A.  
,, PANCHANAN GHOSHAL, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either, Expand the following idea giving reasons.—*

15

হিন্দু সভ্যতা রাষ্ট্রীয় ঐক্যের উপরে প্রতিষ্ঠিত নহে। সেই জন্য আমরা স্বাধীন হই বা পরাধীন থাকি, হিন্দু সভ্যতাকে সমাজের ভিতর হইতে পুনরায় সঞ্জীবিত করিয়া তুলিতে পারি এ আশা ত্যাগ করিবার নহে।

*Or, Briefly describe the condition of Bengali Literature when Madhusudan began his literary activities.*

*Or, Clearly state the reasons that are responsible for bringing about the tragedy of কৃষ্ণকান্তের উইল.*

2. Estimate the value and defects of *শেষনাথ বসু* as a work of art. 10

3. কাব্যের গুণ এই যে, কবির রচনা-শক্তি পাঠকের রচনা-শক্তি উদ্রেক করিয়া দেয়; তখন স্ব স্ব প্রকৃতি অনুসারে কেহ বা সৌন্দর্য্য, কেহ বা নীতি কেহ বা তত্ত্ব সৃজন করিয়া থাকে। 15

Expand clearly the idea contained in the above passage.

4. Amplify one of the following passages in Bengali:—

15

(a) জন সাধারণ বলতে যে প্রকাণ্ড জীবকে বুঝায়, স্বভাবতই তাঁর প্রয়োজন প্রবল ও প্রভূত। এই জন্যই প্রয়োজন সাধনের দাম তাঁর কাছে অনেক বেশী লীলাকে যে অবজ্ঞা করে। ক্ষুধার সময় বকুলের চেয়ে বার্তাকুর দাম বেশী হয়। সে জন্তে ক্ষুধাতুরকে দোষ দিই নে, কিন্তু

বকুলকে যখন বার্তাকুর পদগ্রহণ কর্তে ফরমাস আসে, তখন সেই ফরমাসকে দোষ দিই। বিধাতা ক্ষুধাতুরের দেশেও বকুল ফুটিয়েছেন, এতে বকুলের কোনও হাত নেই। তার একটি মাত্র দায়িত্ব আছে এই যে যেখানে যাই ঘটুক তাকে কারো দরকার থাকুক বা না থাকুক, তাকে বকুল হ'য়ে উঠতেই হবে—ঝ'রে পড়ে তো পড়বে, মালায় গাঁথা হয় তো তাই সহি। এই কথাটাকেই গীতা ব'লেছেন স্বধর্ম নিধনও শ্রেয়, কিন্তু পরধর্ম ভয়াবহ।

- (4) কোন্ খানেতে শেষ আমার  
কোন্ খানেতে শেষ,  
কোন্ খানেতে থাকে আমার  
দুঃখ সুখের রেশ ?  
ভরা স্রোতের মাঝ খানেতে  
কোথায় পাব পার,  
অসীম মাঝে সীমা কোথায়  
অচিন পারাবার,  
কালের যবে হারিয়ে যাবে  
মুহূর্ত্ত নিমেষ,  
কোন্ খানেতে শেষ আমার  
কোন্ খানেতে শেষ ?

(৫) গান বলো চিত্র বলো গুস্তাদী প্রথমে নম্র শিরে—মোগল দরবারে ইষ্ট ইন্ডিয়া কোম্পানীর মতো—তাদের পিছনে থাকে। কিন্তু যেহেতু প্রভুর চেয়ে সেবকের পাগড়ীর রং কড়া, তার তুম্বার চোখ ধাঁধানী বেশী, এই কারণে তারা ভিতরে উৎসাহ যতই পায় ততই পিছন ছেড়ে সামনে এসে জমে যায়। ষপার্থ আর্ট তখন হার মানে, তার স্বাধীনতা চলে যায়। ষপার্থ আর্টের মধ্যে সহজ প্রাণ আছে, ব'লেই তার বুদ্ধি আছে, গতি আছে ; কিন্তু যেহেতু কারু নৈপুণ্যটা অলঙ্কার, যেহেতু তাতে প্রাণের ধর্ম নেই, তাই তাকে প্রবল হ'তে দিলেই অভরণ হ'য়ে উঠে শৃঙ্খল, তখন সে আর্টের বুদ্ধিকে বন্ধ ক'রে দেয়, তার গতি রোধ করে।

5. Translate into Bengali any one of the following passages :—

15

(a) I am not the only one who cannot altogether respond to the jubilation felt by a nation when one of its great men attains the age of sixty or seventy or eighty years. On the contrary I find myself in most excellent company—viz. the company of those whose anniversaries are thus celebrated. For of all the people that take part in a jubilee, the jubilant is the least disposed to feel jubilant. His mood is one apart, full of melancholy and bitterness. The patient endure it in silence, the defiant save themselves from the threatened operation by taking to the woods

(b) If we have to decide which of the two temperaments is nobler—the contemplative or the energetic, there is little question but

that the preference must be given to the more vigorous temperament. This I shall prove by three examples, two logical and one zoological. It is open to the strong poet to resign himself to contemplation in his intervals of rest, but it is not so easy for the contemplative poet to jack himself up to a course of continuous energy. If you peep through the bed-room window of the poets who are envied for their thrice-blessed serenity, you will find them in the evening of their days, sighing for their unhappy indolence.

6. Form four sentences illustrating the different senses in which "বরা" is used, explaining the meaning in each case. Explain also the meaning of the Bengali phrase "ছাই ফেণ্ডে ভাঙ্গা কুলো" and form a sentence with it. 10

7. Write an essay in Bengali on one of the following subjects:— 2)

(a) Good poetry—its conditions, essential characteristic, place of the didactic element in it, intuition, expression and implications.

(b) Patriotism—its conditions and essential characteristics; why it is valued, its relation to other duties of life; its course in case of conflict with other duties in private or public life and in the bigger sphere of humanity, patriotism and cosmopolitanism.

(c) Education—its methods, ideals and objects, bad and good education, its relation to general culture, morality and religion.

### BENGALI (VERNACULAR)

(As an alternative paper for candidates taking up Bengali as Second Language)

*Paper-Setter*—PROF. S. K. CHATTERJI, M.A., D.LITT.

*Examiner*—DR. MUHAMMAD SHAHIDULLA, M.A., PH.D.

*Candidates are required to give their answers in their own words as far as practicable*

*Write your answers in Bengali (for GROUP II, you may write in English; use EITHER the বঙ্গভাষা OR the চলিত ভাষা, avoiding a mixture of the two styles in the same composition)*

#### GROUP I

#### HISTORY OF BENGALI LITERATURE: 45 marks

*Select any THREE questions from this group*

1. Discuss the age and personality of Kṛtibāsa, and briefly indicate how far his adaptation of the Rāmāyaṇa preserves the spirit of the Sanskrit original of Vālmiki.

2. Give a short sketch of the Behula legend, and discuss its treatment in Early Bengali literature, mentioning the more important works dealing with it, with indication of their authors and times.

3. Either, Is the inclusion of Vidyapati among Bengali authors justifiable? When did he flourish? Indicate the character of his poetic genius and his influence on Bengali literature, and in that connexion briefly discuss the nature of the Brajabuli dialect.

Or, Discuss the general characteristics of the Bengali Vaishnava Padas, touching upon their subject-matter, their form, and their literary qualities. Mention five of the most important Pada-writers, with indication of their time

4. Write a short critical study of the work of Rāy Guṇākara Bhārata-chandra, together with some account of his life and times.

5. Give a brief survey of Bengali prose from the earliest times to Išwara-chandra Vidya-sāgara mentioning the more important works and authors in prose.

6. *Either*, Give a short account of *either* Hem Chandra Banerji or Nabin Chandra Sen as a poet.

*Or*, Write a short survey of the modernization of Bengali literature during the second half of the nineteenth century.

7. Write short notes on *five* of the following authors or works :—

শ্রীকৃষ্ণকীর্তন ; প্রেমবিলাস ; ভক্তমাল ; আলাওল ; শ্রীকৃষ্ণপ্রেম-তরঙ্গিনী ;  
রামপ্রসাদ সেন ; জয়নারায়ণ ঘোষাল ; কুলীনকুলসর্কস্ব ; বাসবদত্তা ; তিলোত্তমা-  
সম্ভব-কাব্য ; বাব্রীকির জয় ; অক্ষয়-কুমার দত্ত ; বিবমঙ্গল ; অশোকগুচ্ছ ;  
আষাঢ়ে.

## GROUP II

### HISTORY OF THE BENGALI LANGUAGE: 25 marks

*Answer any two questions from this group*

8. Write a note on the various elements of the Bengali language, explaining in that connexion the terms ভূতব, দেশী, তৎসম, and অর্ধ-তৎসম, with examples of the above types of words

9. What are our materials in tracing the history of the Bengali language from Middle Bengali back to old Indo-Aryan as in the Vedas? How do we seek to make up for the gaps in tracing this history?

10 Discuss the formation of the feminine in Bengali, and write a note on the origin of the affix for the future tense of the Bengali Verb.

11. Write notes on *two* of the following :—

- (a) The Accent-system of Bengali.
- (b) Duplicated words in Bengali.
- (c) The Bengali alphabet—its origin.
- (d) Aryan and non-Aryan in Bengal
- (e) The words বাঙ্গালী (and its variants), মারহাট্টী, and গুজরাটী.

## GROUP III

### BENGALI ESSAY: 30 marks

12. Write an essay in Bengali on *one* of the following subjects :—

- (a) বাঙ্গালী সাহিত্যের প্রকৃতি—প্রাচীন ও আধুনিক ।
- (b) বঙ্কিমচন্দ্র ।
- (c) সমুদ্র ।
- (d) হিমালয় ।
- (e) ছোট গল্প ।
- (f) ব্রাহ্মণ-পণ্ডিত ও বাঙ্গালী সাহিত্য ।
- (g) মুসলমান ও বাঙ্গালী সাহিত্য ।
- (h) বাঙ্গালীর সামাজিক ও অর্থনৈতিক অবস্থা এবং বাঙ্গালী সাহিত্যেও

ভবিষ্যৎ ।

## ASSAMESE VERNACULAR

*Paper-Setters*— { MR. BANIKANTA KAKATI, M.A.  
SRIJIT PADMANATH BORAH, B.A.

*Examiner*—MR. AMBIKANATH BORAH, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate the following passage into Assamese :—

15

Now in regard to the supposed identity of Assamese and Bengali, let it be borne in mind that wherever Hinduism goes, it takes its sacred language, the Sanskrit, along with it. In all the dialects of India, spoken by Hindus, religious and scientific terms are mostly of Sanskrit origin, modified more or less by the peculiarities of each dialect. But the grammars of these dialects are different; hence they are distinct languages, notwithstanding that they have many words in common. So is the case before us. Both Assamese and Bengali borrow largely from the Sanskrit, but the grammars are quite different, as will be readily seen by comparing them together. It might as well be said that French and Italian are one language, because both are sprung from the Latin, as that Bengali and Assamese are one, because they borrow in common from the Sanskrit.

2. Give the corresponding masculine or feminine forms of five of the following words :—

5

পলৰীয়া, নাচনিয়াৰ, ডেকা, চাপনী, আঠা, বান্ধনী, কাচলী।

3. Mention and characterize the *samāsas* in five of the following compounds :—

5

আবতৰ, সাতামপুৰুষ, জপাপূৰণ, সেৱাচুৰ, পোনামাছ, দাকটা, বাঘনেজীয়া।

4. Annotate any three of the following passages :—

15

(a) তিনি ভুবনৰ, অন্তত থাকয়, বতাসৰ আগ খাই।

(b) আচাৰত ভিন্ন হৰি, বিচাৰত এক।

(c) উনিকৰ মুখহি সাক্ষী।

(d) ৰামসিংঘে বোলে পৰ্বত ৰাই আকেহে ভাল মানুহ কলি।

5. Elucidate any two of the following passages :—

10

(a) সেই স্তৰতে নে বচে মহাকাব্য

মহানট শকুন্তলা ?

(b) যতঁবত থকা মহৰা কাঠীটি

যতঁবতে লাগি বয়।

(c) বোকাপ্তিত আছে ভয়ৰ ধূলি।

তাক দিবে লাজ হৈবো সমূলি ॥

6. *Either* examine the statement—

15

“তেওঁৰ মনত কেতেকো যাপোন এটি স্বৰ, এটি প্ৰহেলিকা।”

*Or*, Describe the transfiguration wrought in the world of nature by the voice of the Keteki

7. *Either*, Write after your author an appreciation of কল্পীগীতিকা।

15

*Or*, Characterize Sankar Dev as a descriptive poet.

8. Write an essay on one of the following subjects in Assamese :—

20

(a) জাতীয় উৎসৱ আৰু জাতীয়ভাব।

(b) শ্ৰী-জাগৰণৰ ওচৰ ভবিষ্যৎ।

(c) চিণ্ডালোচনা উন্নতিৰ জখলা।

## HINDI VERNACULAR

*Paper-Setters*— $\left\{ \begin{array}{l} \text{MR. GULAB RAI.} \\ \text{RAI BAHADUR GOBINLAL BANERJEE.} \\ \text{PANDIT SAKALNARAYAN SARMA.} \end{array} \right.$

*Examiner*—MR. RAMKRISHNA SUKIA, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*The answers to the questions are to be given preferably in Hindi*

1. Discuss the advantages and disadvantages of a short story as compared with a novel. What is in your opinion the reason of the popularity of the author of *Santasaroja*? What उपदेश does the author mean to convey to his readers in the story headed उपदेश? Delineate the character of Deva Ratan Sharma, the hero of the story, mentioning the points of his greatness as well as those of his weakness. 10

2. Mention the chief ways in which a novelist may narrate his story. Which way has the author of सौन्दर्योपासक adopted? What name has been given to this form of story in गद्यमीमांसा? Do you think that the ideas and actions of the hero justify this name? Can you suggest any alternative name for the novel? 10

3. What are the characteristics of a नाटिका? Explain the following, pointing out the चलङ्कार, if any :— 15

(a) भरति नेह नव नीर नित, बरसत मुरस अथोर।

जयति अलौकिक घन कोऊ, छवि नाचत मन मोर॥

(b) हैं तो माही सोच में विचारत रही री काहे

दरपन हाथ ते न छिन बिसरत है।

त्यौही हरिचन्द जू बियोग ओ संयोग दोऊ,

एक से तिहारे कछु छवि न परत है॥

जानी आज हम ठकुरानी तेरी बात ।  
तू तो परम पुनीत प्रेम पथ विचरत है ॥  
तेरे नैन मूरति पियार की वसत ताहि ।  
आरसी में रैन दिन देखियो करत है ॥

- (c) परमारथ स्वारथ दोऊ कहं संग मेलि न सानै ।  
जे आचारज होइ धरम निजते पहिचानै ॥  
वृन्दा विपिन विहार सदा सुख सों थिर होई ।  
जन वल्लभी कहाई भक्ति त्रिनु हो नइ कोई ॥  
जगजाल छांडि अधिकार लहि कृष्ण चरित सबही कहै ।  
यह रतन दीप हरि प्रेम को सदा प्रकाशित जग रहै ॥

What are the technical names for the pieces marked (a) and (c)?

4. Give in your own words the meaning of any *two* of the following 15 pieces, bringing out the poetic beauties in them —

- (a) सँदेसौ देवकी सौं कहियो ।  
हौ तौ धाइ तुम्हारे सुत की मया करत नित रहियो ॥  
जदपि टेव तुम जानत उनकी तऊ मोहि कहि आवै ।  
प्रातहि उठत तुम्हारे कान्हहि माखन रोटी भावै ॥  
तल उबटनो अरु तातो जल ताहि देखि भजि जाते ।  
जोइ जोइ मांगत सोह सोइ देती क्रम क्रम करि करि न्हाते ॥  
सूर पथिक, सुनि मोहि रैन दिन बढ़्यो रहत डर सोच ।  
मेरो अलख लड़ै तो मोहन हूँ करत संकोच ॥
- (b) चन्द्र खिलौना लैहो मैया मेरी चन्द्र खिलौना लैहौ ।  
धौरी को पय पान न करिहौ बैनी सिर न गुथैहौ ।  
मोतिन माल न धरिहौ उर पर झंगुली कंठ न लैहौ ।  
जैहो लोटि अवै धरनी पर तेरी गोद न ऐहौ ।  
लाल कहै हौ नन्द बबा कौ, तेरो सुत न कहैहौ ॥  
कान लाय कछु कहति जसोदा दाउहि नाहि सुनैहौ ।  
चंदा हू ते अति सुन्दर तोहि नवल डुलहिया ब्येहौ ।  
तेरी सौं मेरी मैया, अबही ब्याहन जैहौ ।  
सूरदास सब सरवा बराती नूतन मङ्गल गैहौ ।

(c) ऊधो, हम आजु भई बड़ भागी ।

जिन अँखियन तुम स्याम बिलोके ते अँखियां हम छागी ।

जैसे सुमन बास लै आवत पवन मधुप अनुरागी

अति आनन्द होत है तैसे अंग अंग सुखरागी

ज्यो दरपन में दरसन देखत दृष्टि परम रुचि लागी

तैसे “सूर” मिले हरि हमको बिरह व्यथा तनु त्यागी

5. (a) Bhūṣhan is said to have lived in the court of Aurangzeb for sometime. Quote some lines from his poems to show that he did not lose his spirit of independence even in that court.

(b) Either, Explain the significance of the following :—

(i) अलि नवरंगजेव चम्पा सिवराज है ।

(ii) दावा पुरुहुत को पहारन के कुल पर  
पच्छिन के गोल पर दावा सदा बाज को

जहां पात साही तहां दाना सिवराज को ।

Or, In which point does Sūrdās's greatness lie—in his descriptions of शङ्कर रस or in those of बालल्य रस ? Support your answer with quotations if possible.

## MAITHILI VERNACULAR

*Paper-Setter and Examiner—MR. GANGANAND SINHA, M.A.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Discuss, with illustrations from the *Pārijātaharṇa Nāṭaka* of Umāpati, how some of its lyrics may be recognized as worthy specimens of the graceful lyrics composed in the local dialect of Mithila for which the country has been celebrated for centuries. 20

2. Explain with reference to the context:—

10

शारद शशधर जगमग योती ।

देखि हरि गेलाह मनोरथमोती ॥

राधा पद्ममा महरो आइलि ।

एक यूथ संग फूल फुलाइलि ॥

वृन्दावन भय कहु भैल वास ।



ओ दिन राति ओतहि भेल बास ॥

दुइ गोपी विच एक मुरारि ।

दुइ कृष्णक विच एकहीक नारी ॥

जे परि रासक मण्डल भेल ।

केओ कह ओ निशि युग विति गेल ॥

3. Either, Write a short note on the language of Vidyapati's *Kirtilelā* and illustrate it. 10

Or, What is the plot of *Sāmaratī Punarjanma Nāṭaka* by Jivan Jhā? 10

4. Amplify the idea contained in the following extract :— 15

मांझी हमर । चलू हमरा लय

अहि अज्ञात समुद्रक पार

जतय न होएत अन्तस्तल में

माया-वीणा-मृदु झंकार

5. Translate into Maithili :— 15

But Jeannette lived in a mad age—an age now going to destruction. She was drifting with the tide. Already the fires of the Revolution were lighted, already the grim spectre of the Reign of Terror could be seen arising in sodden France. Nor are such fires lacking when plutocracy goes too far in its mad orgies, its despotic oppression of the impoverished people. The blood of a successor of Louis XV—Louis XVI—and his wife, Marie Antoinette, paid for the crimes of their class.

6. Either, Give an example of Malini Chhanda in Maithili. 6

Or, Compose sentences to illustrate the use of—

(a) चौधरा, ओम्हा, and गदह in the feminine gender.

(b) ज्ञ and से in कर्म and सम्प्रदान in both singular and plural.

(c) लियवन in the कर्त्तृवाचक कृदन्त form.

7. Fill up the blanks :— 4

इ ————— समासद ————— गामक ————— मानल —————

8. Write an essay on any one of the following subjects :— 20

(a) *Hero-Worship*. (i) How it developed; (ii) How it stands in these days of democratic ideas; (iii) Its effects on national activities; (iv) Conclusions.

(b) *Wireless*: (i) How it grew in India; (ii) Its different uses; (iii) How distance of space and time has been shortened by it; (iv) Some suggestions as to how its use can be popularized.

## NEPALI VERNACULAR

*Paper-Setters*—{ PANDIT DHARANIDHAR SARMA, B.A.  
,, BODHIKRAM ADHIKARI, M.A.

*Examiner*—MR. DHARANIDHAR SARMA, B.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Describe the birth of Śakuntalā and point out the significance of her name. 10

2. *Either*, Sketch the character of Pururaba and discuss his connexion with his married wife Anśinari. 10

*Or*, Fully describe the deliverance of Urbaśī by Pururaba from the hands of Keśi Danava. 10

3. *Either*, Fully describe the disaster that followed Urbaśī's intrusion into the forest of Gandhamadana. 10

*Or*, State how the author of *Bikramorbaśī* reconciles the impossibility of an earthly king being united with a celestial nymph as husband and wife. 10

4. Write short notes on :— 10

तिलाञ्जलि । क्षात्रधर्म । वात्सल्य । पुंसवन । सङ्गमणि ।

5. Use the abstract nouns of the following in simple sentences of your own :— 10

चतुर्ज । पुरुष । मानु । गच्छ । सुन्दर ।

6. *Either*, Expand the idiom contained in the following :— 15

कोहिको पनि सुखोदय चैन ।

एक नास कहिल्यै रहदैन ॥

*Or*, Write a short story to illustrate ' Handsome is that handsome does.' 15

7. Translate into Nepali :— 15

All men see with the bodily eye the things which nature and man spread out before them; mountain, plain, and stream, deeds of kindness or of hate—the complex pageant of life. But only the man with imagination looks behind, sees and understands the meaning of the objects which to most men are meaningless. A thousand men pass a certain spot daily and see nothing remarkable about it. A painter makes a picture of it, portraying and explaining the meaning, the beauty, which he alone perceives in it, and the thousand understand and marvel that they had been so blind. A thousand men see daily some familiar phenomenon of nature. The scientist sees it and connects it with other apparently unrelated facts, grasps finally its real meaning, and the thousand understand, marvelling that they had not understood before.

8. Write an essay on any *one* of the following subjects :— 20

(a) Female education.

(b) The advantages of the mother tongue being used as the medium of instruction.

(c) Gambling and its evil effects.

(d) Health is wealth.

(e) The poet is the prophet to his age.

## URDU—VERNACULAR

*Paper-Setters*— { MAULVI SYED MOZAFFARUDDIN AHMAH  
KHAH BAHADUR MAULVI MD. YUSUF

*Examiner*—KHAH BAHADUR REZA ALI WAHSHAT

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Answers to be given in Urdu*

1. Discuss in detail the origin of Urdu poetry. 14
2. Sketch the life either of Zaugh or of Ghālib, and discuss the distinctive features of his poetry. 12
3. Illustrate the use of any four of the following by forming sentences :— 8

- (۱) گھر کا بھیدی لنکا ڈھائے
- (۲) دریا میں رہنا ارر مگر مچھہ سے بیر
- (۳) چولی دامن کا ساتھ
- (۴) چھاتی پر مونگ دلنا
- (۵) گدھوں کے هل پھرا کر بھی بس نہ کرنا
- (۶) اُلٹی گڈا بہنا

1. Explain any three of the following:—

10

- (۱)  
سبزہ خط سے ترا کاکل سرکش نہ دبا  
یہ زمرد بھی حریف دم افعی نہ ہوا
- (۲)  
ہوں ترے وعدہ نہ کرنے پر بھی راضی کہ کبھی  
گوشِ منت کش گلبانگ تسلی نہ ہوا
- (۳)  
جب بنی تیر حوادث کی کمان افلاک سے  
خاک کا تودہ بنا انسان کی مشیت خاک سے
- (۴)  
لگے منہ بھی چڑنے دیتے دیتے گالیان صاحب  
زبان بگڑی تو بگڑی تھی خبر لیجے دھن بگڑا

5. Write short notes on the poetry of Mir Taqi 'Mir'. 10  
 6. Translate into Urdu :— 24

Indeed, Aristotle manifested his sympathy for the slaves. But it is regrettable that his sympathy never goes above the pity which we show to the helpless domestic animals. Slavery was in vogue in the whole world. Ill-behaved and ill-treated, underfed and unfed as they were, the whole atmosphere was filled with a spirit of apathy towards them. The passivity and muteness of these poor unfortunate creatures were taken advantage of by the men of strength and status. Rome, the embodiment of civilization, boasted of her slave-markets, the feudal lords of Britain looked down upon the serfs, and the Brahmins of Hindustan were on the top of racial elevation with the 'Sudras' of the servant class at their feet.

7. Write an essay in Urdu on any one of the following subjects :— 20  
 (a) Social reform.  
 (b) Trade and commerce.  
 (c) Knowledge is power.

## MARATHI VERNACULAR

*Paper Setters*—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
 MM. PANDIT SITARAM SASTRI.

*Examiner*—PROF. D. R. BHANDARKAR, M.A., PH.D.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Write an essay in Marathi on any one of the following :— 20  
 (a) Problem of the unemployed.  
 (b) Remedies for overcrowding in the large cities.  
 (c) Solitude or music.  
 2 Translate into Marathi the following :— 15

And this suggests a more vital interest attaching to the skill of country people. What influence the practice of technical gifts may have upon character is perhaps an open question, but farmers are everywhere asserting that the younger generation of labourers are as untrustworthy as they are unskilful. It is true that the farmer is a prejudiced witness, who finds fault as it were by tradition, and was lamenting even in Shakespeare's day 'the ancient time, when service sweat for duty, not for meed', yet now it does really seem as though his accusation may have some ground in fact. Allied with this, there is that much-regretted discontent with rural life which is emptying our villages and filling our towns. And though, of course, the causes of this discontent are originally and chiefly economic, yet a factor in the problem may very possibly be discovered in this : that to the villager the advantages of elementary education are not even a tolerable substitute for the old lost skill that made the days pleasant and won the approbation of all the neighbours.

3. Explain in Marathi the following : —

(a) कळी करि सुनिर्मळी परम उग्र दावानळीं  
तयांत अविशुद्ध मी शलभ जेवि दावानळीं ।  
व्रणार्त पशुच्या शिरावरि वनीं उभे काकसे  
स्मरादि रिपु मन्मनीं अहि न काळ भेका कसे ॥१॥  
सदैव नमितां जरी पद ललाट केलें किणें  
नसे इतर तारिता मज भवत्पदाब्जा विणें ॥  
नता करुनि मुक्त ही ह्मणसि मी बुडालों रिणें ।  
अशा तुज न जो भजे मनुज धिक् तयाचे जिणें ॥२॥  
दुःखघ्नी ओपधी जी असि कथि भगवद्धोकपद्या पिनाकी  
श्रद्धेनें सेविती हो पिडनि अमृतही जीस अद्यापि नाकी ॥  
पावे तीते वरुनि द्विज, अमित पितां दैत्य चक्रायुधाला  
नाहीं कांहीं च ज्याचा भुज मुजग तया दिव्य चक्रायुधाला ॥३॥

(b) वर्पति अन्योत्थावरि कर्णार्जुन ते घनावरी घनसे ॥  
पुरुहूत दूतवात युमणिकरों शर गृहांत रीघ नसे ॥१॥  
बहुकाळ संचितोग्र क्रोध गरळ तुज वरीच ओकाया ॥  
हा भीम भुजग आला सावध हो देख तेज ओकाया ॥२॥  
दिसे ज्या प्राणाची स्थिति जलजपल्लोहक जसे  
तया साठीं केले विविध बहु म्यां पातक असे ॥  
पुढे द्रव्याढ्यांच्या प्रचुर धनलोभास्तव वृथा  
चिलज्जे म्यां केळी बहुतरमुपात्मस्तुतिकथा ॥३॥

4. Show which elements are discussed in नातिशास्त्रप्रवेश by the author of the book. 10

5. Write what particulars you can recollect from आत्मव्रत of Dhondo Keshow Karve. 10

6. Compare the moral and social thoughts of विशुद्धास्त्रा चिपळूणकर with those of आगरकर. 10

7. Give the sense in Marathi of the following : —

15

शास्त्रमते सामद्रय पाचा वर्षांत अधिक लेखावे ।  
अज्ञातवाम यास्तव सरस्वाचि अग्रे च तत्त्व देखावे ॥१॥  
तेरावर्षांत अधिक दश पक्ष द्वादश क्षपा पडती ॥  
चांद्र, शरन्माने हे संख्या संख्यावदाहता घडती ॥२॥

## GUJRATI VERNACULAR

*Paper-Setter*—PROF. I. J. S. TARAPOREWALA, B.A., PH.D.

*Examiner*—PROF. HARGOBIND DAS SETH

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks.*

1. અખાએ ધર્મગુર માટે — મુખ્યત્વે દંણી ગુર માટે — છું છું કહ્યું છે તેનો 8  
સાર આપો.
2. “જુની વેલ ને છુંસરી વાંકી સાંગી સોટા ભાંગીજી 12  
કોના તળાવા ને કોની પિંજણીઓ બળદ આણ્યા બે ભાંગીજી.”  
ઉપલી લીટીઓ ક્યાં કાચમાં આવી છે? એમનો અર્થ બરાબર  
સમજવો. એ કાચ કોણું છે અને એમાં કયો રસ પ્રધાન છે?
3. “મુંગનું મરણ એને ચોગ્ય જ હતું.” આ વાક્ય પર તમારો મત 12  
જે હોય તે લખો.
4. બીજીમ અને તૈલપ એ બેમાં તમે કોને ચઢીઆતો ગણોછો? કારણો 8  
આપો.
5. નીચેમાંથી એકપર નિબંધ લખો :— 20  
(ક) કેળવણીમાં બ્યારનું સ્થાન.  
(ખ) કરકસર.  
(ગ) સાચી ગોરક્ષા.
6. પૃથ્વી વલ્લભની ભાષા તથા રૈલો માટે તમારો અભિપ્રાય લખો. 10

## 7. નીચલામાં તમારા પોતાના શબ્દોમાં સાર આપો :—

15

રામ એટલે સઘળી તરેહના એશઅરામ ભોજવવા જન્મેલો પુરુષ ;  
રામ એટલે દંભની ઘાઈ'શ સુતે ; આ પ્રમાણે અનેકાનેક ભાવનાઓ લોકમતે  
પૂર્ણ અગ્રભવ પછી જ ઉત્પન્ન થઈ છે તેજ દેશમાં અને તેજ સમાજમાં,  
ઉપરના સર્વસામાન્ય નિયમોના અપવાદરૂપ, પોતાના “કલાપી” તખલ્લુસથીજ  
વધારે જાણીતા, કાઠીઆવાડના લાઠી નામના એક ન્હાનકડા સંસ્થાનના  
કાકાર મી સુરસિંહજી હતા. કલાપીનું વલણ ગુજરાતી “કારસી સ્કૂલ”  
તરફ હતું. પોતાના ટુંક જીવનના સુકોમળ પ્રસંગોના ઉભરા કહાડવા મૃદુ  
શેલી તેમનો જણીજ અનુકૂળ થઈ પડેલી લાગે છે. તેમની કવિતા માત્ર  
કવિતા લખવા ખાતર નહોતી. પણ અંતરના આદેશનો વેગ વધી પડવાથી  
તેમને બહાર કાઢવાનું એક સાધન હતું. તેમના કોમળ વિચારો આપણને  
પણ તેટલા જ કોમળ બનાવી શકે છે એ જ ખરા કવિનો વિજય છે.

## 8. ગુજરાતીમાં અક્ષરવાદ કરો :—

15

Knowledge and love are both indefinitely extensible; therefore, however good a life may be, a better life can be imagined. Neither love without knowledge, nor knowledge without love can produce a good life. In the Middle Ages, when a pestilence appeared in the country, holy men advised the population to assemble in churches and pray for deliverance; the result was that the infection spread with extraordinary rapidity among the crowded mass of supplicants. This was an example of love without knowledge. The late war afforded an example of knowledge without love. In each case the result was death on a large scale.

## KHASHI VERNACULAR

Paper-Setters—{Mr. ROY ROWLAND THOMAS, M.A.  
RAI SAHEB DOHORY ROPMAY, B.A.

Examiner—Mr. ROY RONALD THOMAS, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

## 1. Translate into Khashi :—

15

The world is agitated in the latter part of this century by questions of harmony; in society, various plans are being proposed, various attempts are made to carry them into practice, but we know how difficult that is. People find it is almost impossible to mitigate the fury of the struggle of life, to tone down the tremendous nervous tension that is in man. Now, if it is so difficult to bring harmony and peace and love in this little bit of our life which deals with the physical plane of man, the external, gross, outward side, a thousand times more difficult is it, to bring peace and harmony in that internal nature of man.

2. Compose sentences in Khasi, making use of five of the following :— 10  
*Kynjoh khaskain, Kyntiew doh, Dieng byllan, Stong, Pram, Pyrtung, Shkait.*
3. Write an essay on one of the following subjects :— 20  
 (a) We change from day to day.  
 (b) Female education in the hills.  
 (c) The Khasi States.
4. Annotate, referring to the context :— 25  
 (a) Mynba la ju sait ia ki jingjam jong nga da ka makhon, bad u mawsiang ula theh noh ia ki wah da ka umphniang ha nga.  
 (b) Nga la long suk, te u pynlwet ia nga; bad ula bat ia nga na ka ryndang, bad ula lympat lwit ia nga; u pynieng ruh ia nga kum ka sohpdung jong u.  
 (c) Ngam long kum u Dkhar u Lyngkien uba iit da ka kot da ka sla, uba dem ia ka dur ka nuksa.  
 (d) Kaba khyndiat ruh wei la ka ums 'ep te ka long ksiar.  
 (e) Un da sain un da tiah la ka ing ka sem la i kur i kha.
5. Briefly describe the coronation of the Siem of Cherra as given in 10  
*Ka Thang Siem Sohra.*
6. Explain fully the allusions in :— 10  
 (a) U khun pdeng u jong u Siem Sohra.  
 (b) Ioh paw ioh long da ka khoh pharah da u tar pharah ki briew.
7. Either, Discuss the following statement made by the author of Ka 10  
*Niam Ki Khasi* :—  
 Ka pyrthei: Ka Ing ban kamai ia ka hok! khlem bok sha khyndai pateng Niamra.  
 Or, Describe 'Ki Khyndai Dkhot' as given in *Ka Pom Blang Nong-krem.*
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## TAMIL VERNACULAR

Paper-Setters—{ RAO BAHADUR L. K. ANANTHAKRISHNA IYER  
B.A., L.T.  
MM. VEDANTAVISARAD ANANTAKRISHNA SASTRI

Examiner—MM. VEDANTAVISARAD ANANTHAKRISHNA SASTRI

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. அடியிற் கண்ட சொற்களின் பொருள் யாதென வினாக்கள் : 15

(a) கூடை, (b) செஞ்சா, (c) முத்துமிடம், (d) எண்ணா, (e) சிறுநீரம், (f) அரியவற்றன், (g) வியவற்க, (h) எவ்வதூறு வது, (i) இழுக்குதலுடையது.

2. பதனரை தெளிவுரைகளுடன் அடியிற் காணும் குறள்களின் 15  
கருத்துரையை விரையவும் :

(a) அரங்கிணி வட்டாடியற்றே நிரம்பிய நாலின்றிக் கோட்  
பு கொளல்.

(b) ஊவரை தூக்காத வெர்ப்புரவான்மை வளவரை வல்லைக்  
கெடும்.

3. கம்பாரசபை அயோத்தியாகாண்டம் இரண்டாவது பட 15  
லத்தின் கதைவன் வரலாறும் மூன்றுடலங்களுடையவும் திருநாம  
ங்களும் அவற்றின் காரணங்களும் யாவையென உரைக்குக.

4. மூன்றுடலங்களிலிருந்தும் தன்னிஷ்டப்பட்ட யாதேனு 15  
பொய்வொரு பாடல் வினாந்து, பதவுரை தெளிவுரைகளுடன்  
அவற்றின் கருத்தை விளங்கவுரைக்கவும்.

5. “ திருவள்ளுவர் ” “ கம்பர் ” இவர்கள் வரலாற்றையும் இவர் 10  
களது பாஷையை விளக்கவும்.

6. “ எரியாத் சுடப்படினு. மும்வுண்டா மும்யார் பெரியார் 15  
பிழைத் தொழுருவார்.” இக்குறளைப்பற்றியோர் கீண்ட வியர்வு  
மெழுதுக.

7. Translate into Tamil :—

15

A few years ago, when the Bourbons were expelled from Naples, the country was in an unsettled state, and infested by brigands. The mountainous district of Furlo was avoided by all prudent travellers, as being the scene of some of the most daring robberies that had ever been known. Here, in a lonely spot, dwelt a hermit, who occupied a small hut, miserably

furnished, and but scantily supplied with the necessities of life. He spent most of his time in attending the sick and comforting the afflicted; and the reverend-looking old man, with his long white beard and benign countenance, was regarded with favour by all. One evening a carriage with a lady and her daughter, was slowly wending its way up the steep incline past the hermit's hut. To their dismay, the conveyance was stopped by a man wearing a mask, who demanded their money and other valuables. "Signora", said the polite robber, "I wish to use no violence to you, but you see my men"—pointing to about twenty armed men, drawn up at some distance, under the trees.

### TELUGU VERNACULAR

*Paper-Setters*—{ PROF. S. RADHAKRISHNAN, M.A., D.LITT.  
DR. B. RAMCHANDRA RAU, M.A.

*Examiner*—DR. B. RAMCHANDRA RAU, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. తార తన భర్తకై విలపించిన పీఠిక గాని 10

లేక

వారికిని శ్రీ రామునికిని జరిగిన యుద్ధము గాని నాటకమునందు  
కనబడుచుట లేదు. దీనికి కారణము లాసంగుడు.

2. విభీషణుని నీతి వాక్యములు సంగ్రహముగా వ్రాయుడు. 10

3. లక్ష్మణరావు గారి "వ్యాసావళి" యందు ముఖ్యమైన పేర్లను 20  
వ్యాసములను పేర్కొని వాని సారాంశము మీనస్వంత మాటలందు  
వ్రాయుడు.

4. Translate the following stanzas into idiomatic Telugu prose :— 20

One morn when I sat with downcast eyes  
And my back was turned upon thee,  
When I was drowned deep in my own musings,  
Then fell thy shadow upon my limbs  
And I felt a light touch of thy presence.  
Like a proud woman that would not listen  
To the entreaties of her lover,

I hugged my pride and made a show that  
I never cared for thee; but still, within my heart  
There was yearning for thee and thee alone.

The curtain was raised.

To my utter shame our eyes met and lingered.  
There arose a thrill of hope and a tremor of joy  
While thy hand lay upon my heart, kindling  
An eager desire to fly to thy side.

Still I leagued to cast indifference at thee

But, perchance, my heart did greet thee

Is the light of love come upon me?

Shall I meet thee face to face once again, that

I might offer my pride to thee in one eternal devotion?

5. Write an essay in Telugu on 'the Ancient Hindu Civilization' 30  
making use of the following hints :—(a) language, (b) products of the  
country, (c) religious worship, (d) literature, (e) foreign trade.

6. ఈ క్రింది పద్యమునకు కావ్యరసము వ్రాయుడు :— 10

ఎవ్వరు సూర్యుల నరునిప్పుడ కాంచెడు రిత్త వారికిం  
గ్రోవున నుజ్జ్వలార్థములు గొండని యీవల దిట్టులిచ్చినా  
నవున జనంబు మిక్కిలి ధనంబులు గల్గిన జేయరాదెని  
కెవిధి నైన నద్యయములెందున పాత్రపు టిదియొప్పునే.

## MALAYALAM VERNACULAR

Paper-Setter & Examiner—REV. C. E. ABRAHAM, M.A., S.J.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Give a free translation of the following passage into your vernacular :— 15

That man, I think, has had a liberal education, who has been so trained in youth that his body is the ready servant of his will; whose intellect is a clear, cold, logical engine with all its parts of equal strength, and in smooth working order; whose mind is stored with a knowledge of the great and fundamental truths of Nature and the laws of her operations; and who, no stunted ascetic, is full of life and fire, but whose passions are trained to be the servant of a tender conscience; who has learned to love all beauty, to hate all vileness, and to respect others as himself.

2. “അഴലിതു വരുവാനൊരജ്ഞാനം ഞാൻ പിഴ 10  
പലതും ബത ! ചെയ്തു പോയിരിക്കാം.”

ബധിരനായി തീരുവാൻ തക്കവണ്ണം എന്തെല്ലാം  
പിഴകൾ താൻ ചെയ്തു പോയിരിക്കാം എന്നാണ് കവി  
“ബധിര വിലാപ” ത്തിൽ സങ്കല്പിച്ചിരിക്കുന്നത്?

3. അത്ഥം സ്വന്തവാചകത്തിൽ എഴുതുക. 5

*Either, (a)* സ്വയമഥ ചെവിപോലെ മനനാലി-  
ഗ്രയപുമിവന്നു വിനക്തമാകിലാട്ടെ;  
ദയശമകരി ! ചിത്തമങ്ങയിൽത്താൻ  
നിയതമുറയ്ക്കണ, മെങ്കിൽ ഞാൻ  
കൃതാത്ഥൻ.

*Or, (b)* ഗദ കബളിതമെന്റെ കണ്ണ് യുഗമം  
വദന വിദ്രക്ഷണ മാത്രമായ് ചമഞ്ഞു;  
കദമിതൊഴിവാക്കുകംബികേ ! നിൻ  
പദസരസീതഹ ദാസനല്ലയോ ഞാൻ ?

4. റാസ്സലാസിൽ നിങ്ങൾക്ക് താല്പര്യമുള്ള ഒരു 15  
കഥാപാത്രത്തിന്റെ സ്വഭാവലക്ഷണങ്ങൾ ദൃഷ്ടാന്ത  
സഹിതം വർണ്ണിക്കുക.

5. *Either*, മണക്കാട്ടെ മഹമ്മദിയ പാളയത്തെക്കുറിച്ച് 20  
നിങ്ങൾക്ക് എന്തറിയാം ? ഷംസുഡീൻ ആരു ?

*Or, “സുഭദ്ര,” “സുന്ദരയുൻ,”* — ഇവരിൽ ആരെ  
ജീലും ഒരാളുടെ ചരിത്രം ചുരുക്കി എഴുതുക.

6. Write an essay, not exceeding *three* pages, on *one* of the following subjects :— 35

- (a) “മാർത്ഥസംവത്സരം” യുടെ മാഹാത്മ്യം.
- (b) പദ്ധതിക്കു നിർദ്ദേശിക്കേണ്ടതിന്റെ ന്യായങ്ങൾ.
- (c) രാഷ്ട്രീയ രംഗത്ത് സ്ത്രീകൾക്കുള്ള സ്ഥാനം.
- (d) ഇന്ത്യയിലെ സാംക്രമിക രോഗങ്ങൾ.
- (e) യുദ്ധജനങ്ങളുടെ ആവശ്യങ്ങളായിരിക്കേണ്ടവ എന്തെല്ലാം ?

### KANARESE VERNACULAR

*Paper-Setter & Examiner*—MR P. APPAJI RAO, B.Sc.

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

- 1 Translate into Kanarese the following :—

15

It is a view of delight to stand or walk upon the shore-side and to see a ship tossed with tempest upon the sea; or to lie in a fortified tower, and to see battle joined upon a plain. But it is a pleasure incomparable for the mind of man to be settled, landed and fortified in the certainty of truth; and from thence to desery and behold the errors, perturbations, labours and wandering up and down of other men.

Brief and powerless is man's life; on him and all his race the slow sure doom falls pitiless and dark. Blind to good and evil, reckless of destruction, omnipotent matter rolls on its relentless way; for man condemned to lose his dearest, to-morrow himself to pass through the gate of darkness, it remains only to cherish, ere yet the blow falls, the lofty thoughts that enoble his little day.

2. Write an essay in Kanarese on any *one* of the following topics :—

20

(a) ಭಕ್ತಿ — ರಾಜಭಕ್ತಿ — ಗುರುಭಕ್ತಿ — ಪತಿಭಕ್ತಿ — ಮಾತാಪಿತೃ  
ಭಕ್ತಿ — ದೇವಭಕ್ತಿ — ಸ್ವಾಮಿಭಕ್ತಿ.

(b) Development of broadcasting in India.

(c) Life history of Sir C. V. Raman.

(d) We are all born in subjection.

3. Describe briefly what you understand by the expression 'Aswa-medha'. 10

4. Chhatrapati Sivaji and his lofty ideals. 15

- |  |    |
|--|----|
| 5. Sketch briefly the character of Subhadra.       | 15 |
| 6. The morals of Pancha Tantra in about 150 words. | 15 |
| 7. Develop the idea contained in the following :—  | 10 |

Visitor :—'From whom didst thou learn wisdom?'

Sage :—'From the blind, who advance not their feet till they have tried the ground.'

## SINHALESE VERNACULAR

*Paper-Setter & Examiner—REV. P. SEELANANDA*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

- |   |    |
|---|----|
| 1. Translate into English <i>two</i> of the following passages :— | 20 |
|---|----|

(a) බුදුහු උදයම සිරිරු පිළිඳු යිති කොට ගඳකි  
ලියට වැද පලසමවත් යම වැදවැඩි නුග්ග. ඒසත්තෙව  
රජතුගේ පබු ඇඩුල් සල අස්න හුණුවිය. “ගේ මේ  
කීමෙක ගෝසි” අවජනෙ බුදුන්ගේ සුනූපරනා ජන  
පදයට ගමන්දක විස්සම් දෙව්පුත්තු කැඳවා “පුහු  
අදු බුදුහු තුන්සියක් යොදුන් තුන් සිගන්තට වටිනි.

(b) එරජ බවිවිසිය. එසෙසින්ම සුවරජු ඇමැති  
තත්ති නිබු සොළොස් අතවැස් සෝදු බිඹිවිවුහ. රජු  
විසින් සතරසාගා වනින් සහරා කරණ ලද එරජය  
ඉතා සබාධවිය.

(c) එකල්හි රජ “පසුබ පමුරුදෙනුවත් විසින්  
පෙරවැදුන් පමුරට විගුණ කල මැනවැයි මසාද  
හට කුමක්දී යමි?” යිනි.

එසමාහි කසුබු සමමාසවිබුදුහ උපද බරණැස  
වෙ සේනි.

2. Explain the following and write a short note on the **15**  
underlined word :—

(a) එසේමැයි එපවත්, පෙරනැල් සිටම මෙවිය න්  
පිනවිය රනාගැකිවත්, පමණ යොග්‍යසෙකි ඒකෙබියත්.

(b) තිනි හේතොර ඇවද, කළි තසලද, කතො මුදු, උදු සන සවසද, පහන් දල්වව විමණතො වරද?

3. Paraphrase the following verses and explain the underlined words with reference to context :— 20

සරාසිරින'ද සුත්—සරාසිසිත්තු සෙවියන්,  
මනඳෙල සුරන්තසි රත්වි—රවිපත් අත්තිරිතල,  
දිය නැත්මැයි දියෙහි—සහ තෙදනවද නොසහා  
වියොවග එද, සදහා—දුනු ගත්තු සුත්සදහා.

4. Write an essay on 'Ambatta-Manawa' according to Ambatta Sutra. 15

5. Write notes on the following :— 15

(a) Kavya-Sekara

(b) Senaka Pandita.

(c) සුනාපරත්ත ජනපදය. (d) නමීද නදිය.

(e) සවබබ පවිතය. (f) කැලණිය.

6. Translate into Sinhalese the following :— 15

What other great people has devoted itself to this exalted ideal? To what other nation in the world can all eyes look for an instant sympathy that thrills the whole body politic, when men anywhere are fighting for their rights? I do not know that there will ever be a declaration of independence and of grievances for mankind, but I believe that if any such document is ever drawn it will be drawn in the spirit of the American Declaration of Independence, and that America has lifted high the light which will shine unto all generations and guide the feet of mankind to the goal of Justice and Liberty and Peace.

## BURMESE VERNACULAR

Paper-Setters—{ PROF. PE MAUNG TIN, M.A.  
MAUNG BA, B.A.

Examiner—PROF. PE MAUNG TIN, M.A.

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. အောက်ပါ စာပိုဒ်၏ အဓိပ္ပာယ်ကိုသင့် စကားဖြင့်စကားပြင် 15  
ခရီးပါ။

အမျိုးသမီးများ၊ လူမျိုးအားကိုး၊ စီးပွားပတ်သက်၊ အထက်  
ပညာ၊ အဖြာဖြာထွင်း၊ လူတို့နှင့်၌၊ သိမြင်ပုံ၊ လေးလေးချာတွင်  
နှစ်ခုစေ့၊ ခွေးရှစ်ကောင်ကို၊ သိနေမှန်စွာ၊ ကြောင်းခြင်းရာမှ၊ ပမာ  
ဆိုရိုး၊ မိမိနှင့်သရက်၊ ဆိုးနှင့်ကြွက်ထိုး၊ သိခက်ခဲစွာ၊ ပညာတိမ်  
ညှင်၊ ကြံဆင်ခြင်၍၊ ကျယ်ကျယ်လွင်လွင်၊ ပဲ့ထွင်ပဲ့လေ့၊ နွဲ့ထွင်းကား  
သပ်၊ ခိုင်ထွင်တင်လေ့၊ ကြပ်ထွင်သတ်ပင်း၊ ချောင်ထွင်ထွင်း  
လေ့၊ နှိုင်းခြင်းဆိုရေး၊ သိရေးပညာ၊ မြက်ကိုခွေးယူ၊ ဆိတ်မှုအခါ၊  
လဲခြင်းအနေ၊ အတော့ခပ်ပွန်း၊ အကြံဆန်းသည်၊ နှုတ်ကြမ်းပြောပါ၊  
လူတကာတို့၊ အကောအနှစ်၊ အသစ်စမ်းမိုး၊ ကျောက်ကိုကျောက်မျိုး၊  
အသိုးသိမ်း၊ ဤမြစ်မြစ်တည်း၊ ဝမ်းထဲမှတ်မိက်၊ သတိတိုက်တွင်၊ ထား  
စေချင်ဟု၊ သံလျှင်သံကို၊ ဖျက်သောဆို၏၊ လှေကိုလှေပင်၊ ဆယ်ယူ  
ငင်သို့၊ ပုံပြင်ခြင်းရာ၊ မေတ္တာစာကို။ ။ ကြောင်းပြောယူဆတတ်  
စေသော။



## 2. Translate into Burmese :—

One of the first and most clearly recognized rules to be observed is that happiness is most likely to be attained when it is not the direct object of pursuit. In early youth we are accustomed to divide life broadly into work and play, regarding the first as duty or necessity, and the second as pleasure. One of the great differences between childhood and manhood is that we come to like our work more than our play. It becomes to us, if not the chief pleasure at least the chief interest of our lives, and even when it is not this, an essential condition of our happiness. Few lives produce so little happiness as those that are aimless and unoccupied. Apart from all considerations of right and wrong, one of the first conditions of a happy life is that it should be a full and busy one, directed to the attainment of aims outside ourselves. 17

## 3. အောက်ပါအကြောင်းတရားကိုစာဖတ်ကုံးစရေးသားပါ။ 20

- (က) ယဉ်ကျေးခြင်း၏အကြောင်း  
(ခ) စည်ပင်ထုံးညီညွတ်ခြင်း၏အကြောင်း  
(ဂ) သမင်းစာ၏တန်းခိုးအာနုဘော်

## 4. မြန်မာစာဖတ်ထုံးစံ “သိချင်း” နှင့် “ထက်” ဖော်ထုတ်ချား 10 စကြောင်းရေးသားပါ။

5. ကြေးမျိုးဝမ်းကွေ့၊ မိုးရေထူ၊ ဥပမာ၊ ဥပမာ၊ ယဉ်ကျေး၊ 10  
စံနဲ့ဥပမာ၊ ညီညာမြောက်မြင့်၊ နှိုင်းထောက်စာနဲ့၊ ခြောက်ဆင့်  
သောစကားမျိုးတွင်၊ ကြောင်းကျိုးတတ်မှန်၊ စကားမှန်လှ၊ သန့်ရှင်း  
မြေမြေ၊ ဗြဟ္မာ့လွှေထိုးထိုး၊ ရင့်လေးနာပျော်၊ စာတော်မျိုး၊ ထို  
တတ်လှသော၊ သုတဂုဏ်ပေါင်းတန်ညောင်းစက်၊ စာသန့်ရှင်း၊  
မာရမိန့်သည်။

ဤထိုက်အဓိပ္ပါယ်ကိုတော်ဖြဖြီးလွှင့်၊ ခက်ရာ  
ခက်ဆင်အချက်များကိုလည်းရှင်းပြပါ။

6. (က) သိထင်းကျတ်ခါ၊ နီးနိုင်ပါ၊ ဝါလည်းဝါတွင်း၊ ရှေ့ကင်း 15  
 ဤ၊ တော်သလင်းခံတတ်သည်။ မုရင်းမိုက်ခါ၊ မိုးမရွာ၊ လွင်တာ  
 ကျယ်ဝင်း၊ လယ်ကန်ဆင်းမှာ၊ ခေတွင်းထူးမြဲဖြစ်ချေသည်။ ရွှေ  
 ရည်ထယ်ထွေး၊ စံနှင့်ဝေး၊ အရေးမလွှဲချေသည်။ နေပြည်တွင်ပြေး၊  
 တိမ်နှင့်ထွေး၊ မြန်မွေးမပျံ့ရှိတတ်သည်။ နေသည်မှာထောင်တွင်း၊  
 ငယ်မည်မှာမောင်ကင်း၊ ကောင်းသတင်းအရနှင့်၊ ဌာနကျွေးရွာတွင်  
 မနေ၊ မျိုးဆွေရင်းချာ၊ ညာတကာတရတို့၊ ဆယ့်သေးဖွဲကင်းခြင်း  
 အောင်ကြံဆောင်ကြိုးစား၏။

ဤစာပိုဒ်၏အနက်အဓိပ္ပါယ်ကိုဆော်ပြပြီးလျှင်၊ ၎င်းသည်ဦး  
 ပုညရေးသောစာဖြစ်သည် မဖြစ်သည်ကိုမည်သည့်အချက်များကို  
 ထောက်၍သိနိုင်သနည်း။

(ခ) အရပ်ရပ်အင်းရဲသား၊ ကိုယ်တို့နှယ်ယူများနှင့်၊ ညာဏ်  
 ရည်သွားသိထိမ္မာ၊ ငွေထဲဖမ်းခယ်ကလျှင်၊ မိုးပေါ်မှာနေနှင့်လကို၊  
 လူ့ပြည်ကရနီးနှင့်၊ ကြိုးစားဤလှမ်းသော်လည်း၊ ပင်ပန်းကာပို  
 အကျ၊ ဗြဟ္မာကတစင်းအပ်၊ လူ့ရပ်ကအပ်သွား၊ ချလိုက်လျှင်ငြား  
 တန်၏။ ကံပုညသန္တာ၊ ဆယ်ထိမပြောက်ရွေးတဝဲမှာ၊ ပံ့ထီးခြင်းရွေး  
 ကွာလျက်၊ သမုဒ္ဒရာနှင့်နားအခြေ၊ ကေသရာနှင့်ဘားတလက်၊ ဝက်  
 သားနှင့်ငါးပိဖုတ်၊ တဲဝတ်နှင့်ရွှေနန်းထောင်၊ နေရောင်နှင့်ပိုးဝန်း  
 ကြိုး၊ လူရူးနှင့်နတ်သား . . . မဆိုင်တဲ့နေရာမှာ၊ အနာပေါက်ချမကျ  
 သကဲ့သို့။

ဤစာပိုဒ်၏အဓိပ္ပါယ်ကိုတော်ပြပါ။

7. ဦးကြင်ဥရေးသားသည့်ပဒေသာသီချင်းမှာအနက်၊ 15  
 မည်သည့်သီချင်းကိုအာဏကြိုက်ဆုံးနည်း။ ၎င်းသီချင်း  
 ၏အာဘော်ကိုပြပြီးလျှင်ညော်သည့်အ  
 ကြောင်းကြောင့်သင်နှစ်သက်သည်ကိုလည်းရှင်းလင်းစွာပြပါ။

## PORTUGUESE VERNACULAR

*Paper-Setter & Examiner—DR. P. D. BRAGANCA CUNHA.*

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Justify the following saying of Oliveira Martins about Anthero de Quental by quoting some sonnets:— 25

O proprio do genio é querer realizar o irrealisavel ; é ser chimerico, no sentido critico da palavra, quando por chimera entendemos uma verdade essencial que nao pode todavia reduzir-se a formulas comprehensiveis, ou uma cousa cuja realidade se sente, sem se poder ver.

2. Discuss the philosophy of Anthero, taking the following verses as a theme :— 30

Minha alma, ó Deus, a outros céus aspira :  
Se um momento a prendeu mortal belleza  
E pela eterna patria que suspira ..

3. Give your impressions about the reign of D. Joao I as it is pictured in *Monge de Cister*. 25

4. Write short biographical notes on Herculano and Anthero de Quental.

## ALTERNATIVE PAPER IN ENGLISH

*Paper-Setters—*{ PRINCIPAL HERAMBACHANDRA MAITRA, M.A.  
MR. JYOTISHCHANDRA BANERJEE, M.A.

*Examiner—*PRINCIPAL HERAMBACHANDRA MAITRA, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Try to form an estimate of the far-reaching effects which Dr. Arnold's scheme of education produced on English Public School life, and explain in this connexion the following :—' Teachers and prophets have strange after-histories ; and that of Dr. Arnold has been no exception.' 15

Or, Attempt a character-sketch of Gladstone in the life of his attitude towards the Sudan affair, when Gordon's life was hanging by a thread.

2. Describe briefly the manner of life led by Miss Florence Nightingale after her return from the Crimea to her death, and her relations with Sidney Herbert and Dr. Jowett. 15

3. Explain, with reference to the context, the following passages :—

(a) While Newman was a child he wished that he could believe the Arabian Nights were true. When he came to be a man, his wish seems to have been gratified. 4

(b) If Lord Panmure was a bison, Sidney Herbert, no doubt, was a stag—a comely, gallant creature springing through the forest; but the forest is a dangerous place. One has the image of those wide eyes fascinated suddenly by something feline, something strong; there is a pause, and then the tigress has her claws in the quivering haunches, and then—!

(c) A Christian hero! Let him wait till the Mahdi's ring was really round him; till the Mahdi's spear was really about to fall! That would be the test of heroism! If he slipped back then, with his tail between his legs—! The world would judge.

(d) He would treat the boys at Rugby as Jehovah had treated the Chosen People: he would found a theocracy, and there should be Judges in Israel.

4. Give the substance of the conversation between the two brothers in *Comus* regarding the probable plight of their missing sister, and contrast their characters in the light of the views respectively expressed by them.

5. Reproduce *either* the substance of Milton's denunciation of the Clergy of his day; *or* his observations on *Fame* and *Philosophy*.

6. Explain, with reference to the context, the following passages:—

(a) Fame, is the spur that the clear spirit doth raise  
(That last infirmity of noble minds)  
To scorn delights and live laborious days;  
But the fair guerdon when he hopes to find,  
And thinks to burst into sudden blaze,  
Comes the blind Fury with the abhorred shears,  
And slits the thin-spun life.

(b) But that two-handed engine at the door,  
Stands ready to smite and smite no more.

(c) Virtue may be assail'd, but never hurt;  
Surpris'd by unjust force, but not enthrall'd;  
Yea, even that which mischief meant most harm,  
Shall, in the happy trial, prove most glory.

(d) If Virtue feeble were,  
Heaven itself would stoop to her.



## SANSKRIT—HONOURS

Paper-Settlers—	{	PROF. D. R. BHANDARKAR, M.A., Ph.D.
	{	MR. KOKILESWAR BHATTACHARYYA, M.A.
	{	MAHAMAHOPADHYAY ASUTOSH SASTRI, M.A.
	{	MR. MURALIDHAR BANERJEE, M.A.
	{	DR. PRABHATCHANDRA CHAKRABARTI, M.A., Ph.D.
	{	„ SURENDRANATH DASGUPTA, M.A., Ph.D.
	{	MAHAMAHOPADHYAY ASUTOSH SASTRI, M.A.
	{	MR. BIHARILAL BANERJEE, M.A.
	{	„ NILMANI CHAKRABARTI, M.A.
	{	PANDIT LAKSHMINARAYAN VEDA-SASTRI.
	{	MM. BHAGABATKUMAR GOSWAMI SASTRI, M.A.,
	{	Ph.D.
MR. SATYENDRANATH SEN.		

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Sum up the speech of Uddhava to Kṛṣṇa in Canto II of the *Sisupālabadhā*. 10

2. Translate into English :— 10

(a) हते हिडिम्बरिपुणा राज्ञि द्वैमातुरे युधि ।

चिरस्य मिश्रव्यसनी सुदमो दमघोषजः ॥

(b) सर्वकार्यशरीरेषु मुक्ताङ्गस्कन्धपञ्चकम् ।

सौगतानामिवात्मान्यो नास्ति मन्त्रो महीभृताम् ॥

(i) Explain the allusion in Extract (a). Derive द्वैमातुरे and मिश्रव्यसनी in it. 4

(ii) Expound the *samāsa* in अङ्गस्कन्धपञ्चकम् in Extract (b). What is meant by अङ्ग and स्कन्ध ? 4

(iii) Analyse the points of resemblance in the simile contained in Extract (b). 4

3. Amplify in Sanskrit :— 5

सतीव योषित् प्रकृतिः सुनिश्चला पुमांसमभ्येति भवान्तरेष्वपि ॥

4. Scan the following :— 5

व्योम्नीव भ्रुकुटिस्थलेन वदने केतुश्च काराम्पदम् ॥

5. Translate into English the following extracts :— 7

(a) तथाह वाग्भटः—अनेकरोगानुगतो बहुरोगपुरःसरः । राजयक्ष्मा क्षयः शोषो रोग-राडिति च स्मृतिः । नक्षत्राणां द्विजानां च राज्ञोऽभूद्

यदर्थं पुरा । यच्च राजा च यक्ष्मा च राजयक्ष्मा ततो मतः । इति । अतो भुर्जेय इति भावः । एतेन “चिरस्य मितव्यसनी सुदमो दमघोषजः” इति निरस्तम् ।

(b) नाकारीति न । किं त्वकार्यवेत्यर्थः । अनौचित्यात् प्राप्त-  
नर्मसाचिव्यनिषेधनिवारणार्थं नञ्छब्दद्वयम् । संभाव्यनिषेधनिवर्तने नञ्छब्द-  
द्वयम् इति वामनः ।

6. Define आचार्य्य and उपाध्याय according to Manu. Do they deserve 8  
greater honour than father and mother? Give reasons for your answer  
from the point of view of Manu.

7. Translate into English :— 10

(a) वैवाहिको विधिः स्त्रीणां संस्कारो वैदिकः स्मृतः ।  
पतिमेवा गुरौ वामो गृहार्थोऽग्निपरिक्रिया ॥

(b) मुण्डो वा जटिलो वा स्यादथवा स्याच्छिखाजटः ।  
नेन ग्रामेऽभिनिम्लोचेत् सूर्यो नाभ्युदियात् क्वचित् ॥

8. Comment on the following after Kullūka :— 8

वेदोऽखिलो धर्ममूलं स्मृतिशीले च तद्विद्वाम् ।  
आचारश्चैव साधूनामात्मनस्तुष्टिरेव च ॥

9. Translate into Sanskrit :— 25

(a) To man is allotted a hundred years; half of that passes in sleep; of the other half, one half is spent on childhood and old age; the rest is passed in service with illness, separation, and pain as companions. How can mortals find joy in life that is like the bubbles on the waves of the sea?

(b) For a moment man is a boy, for a moment a lovesick youth, for a moment bereft of wealth, for a moment in the height of prosperity; then at life's end, with limbs worn out by old age and wrinkles adorning his face, like an actor, he retires behind the curtain of death.

(c) With the rising and setting of the sun man's life day by day wears away; struggling beneath the burden of active toil we note not the passing of time; birth, age, misfortune, death, we see and tremble not; the world is maddened by drinking too deep of the draught of carelessness and confusion.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Kaṇva after his return from the Sōma-tīrtha did indeed give his support to, and approval of, the secret marriage of Sakuntalā—so we hear from Priyavardā. But yet he did not allow even a single day to pass before sending Sakuntalā to her husband's house. Does any

inconsistency strike you between these two acts? Give your reasons, if any.

Or, Describe the character of Vāsavadattā as delineated in the *Ratnāvalī*, and contrast it with that of Śakuntalā. Do you find anything peculiarly Indian in Śakuntalā's character? 5

2. Either, The author of the *Kārya-Prakāśa* has given the weight of his own authority to the current opinion that the original author of the *Ratnāvalī* was not Śrīharṣa but a धावक (a washerman). Have you come across any internal evidence in the drama itself which proves this contention? Discuss the point.

Or, Discuss the character of Yaugandharāyaṇa with special reference to his diplomacy.

3. Explain, after the manner of Mallinātha, (a) or (c) and (b) :— 8

(a) सव्याजैः श्रपयैः प्रियेण वचसा चित्तानुवृत्त्याधिकं  
वैलक्ष्येण परेण पादपतनैर्वाक्यैः सखीनां मुहुः ।  
प्रत्यासत्तिमुपागता न हि तथा देवी रुदत्या यथा  
प्रक्षाल्यैव तथैव बाष्पसलिलैः कोपोऽपनीतः स्वयम् ॥

(b) प्रत्यादिष्टविशेषमण्डनविधिर्वामप्रकोष्ठे श्रुतः  
बिभ्रत् काञ्चनमेकमेव वक्तुं श्वासोपरक्ताधरः ।  
चिन्ताजागरणप्रताम्रनयनस्तेजोगुणैरात्मनः  
संस्कारोल्लिखितो महामणिरिव क्षीणोऽपि नालक्ष्यते ॥

(c) दिशः पृथुतरीकृता जितनिजाब्जपल्लवपः  
चतुर्भिरपि साधु साध्विति मुखैः समं व्याहृतम् ।  
क्षिरांसि चकितानि विस्मयवशाद्भुवं वेधसो  
विधाय ललनां जगत्तयललामभूतामिमाम् ॥

Conjugate the root of रोदिति in Extract (a) in लङ् and लुङ् third pers. sing. 11

Explain the compound महामणि in Extract (b) and give the uncompounded form.

In Extract (c) give the meaning of समं as used here, and write a sentence in which the word has a sense different from that which it denotes in the extract.

Who is the speaker of Extract (c), and what does he refer to by it? Analyse the compound जगत्तयललामभूताम्. What peculiarity do you find in the compound ललामभूत ?

4. Either,

प्रसीदेति ब्रूयामिदमसति कोपे न घटते  
करिष्याम्येवं नो पुनरिति भवेद्भयुपगमः ।  
न मे दोषोऽस्तीति त्वमिदमपि च ज्ञास्यसि मृषा  
किमेतस्मिन् वक्तुं क्षममिति न वेद्मि प्रियतमे ॥

Distinctly explain the succession of ideas coming to the mouth of the speaker and the rejection of every one of them as being impossible. Who speaks this stanza? 5

Or,

स्वप्नो नु माया नु मतिभ्रमो नु  
क्लिष्टं नु तावत् फलमेव पुण्यैः ।  
असंनिवृत्त्यै तदतीतमेव  
मनोरथानामतटप्रपातः ।

What sad incidents does the speaker allude to in the above stanza? These he regards as the possible consequences of any one of the supposed four causes. Distinctly explain these causes. Some read the fourth line as मनोरथा नाम तटप्रपाताः. Which reading do you prefer and why? 5

5. Describe in detail the nature of the selfless and devoted service rendered to king उदयन by his minister योगन्धरायण. 3+3

And in this connexion translate into English the following stanza :—

प्रारम्भेऽस्मिन् स्वामिनो वृद्धिहेतौ  
दैवेनेत्थं दत्तहस्तावलम्बे ।  
सिद्धेर्भ्रान्तिर्नास्ति सत्यं तथापि—  
स्वेच्छाचारी भीत एवास्मि भर्तुः ॥

What was दैव mentioned in the stanza and how did it lend its support to the work (प्रारम्भ) undertaken? Why was the self-accusation described as स्वेच्छाचारी ? 3

6. Translate any one of the stanzas, giving its context :— 6

(a) दीर्घोपाङ्गविसारि नेत्रयुगलं लीलाञ्छितभ्रूलतं  
दन्तान्तः परिकीर्णहासकिरणज्योत्स्नाविलिखाधरम् ।  
कर्कन्धुद्युतिपाटलोष्ठरुचिरं तस्यास्तदेतन्मुखं  
चित्रेष्वालपतीव विभ्रमलसत् प्रोद्भिन्नकान्तिद्रवम् ॥

(b) भ्रूभङ्गे सहस्रोद्गतेऽपि वदनं नीतं परां नम्रतां  
ईषन्मां प्रति भेदकारि हसितं नोक्तं वचो निष्ठुरम् ।  
अन्तर्बाष्पजङ्गीकृतं प्रभुतया चक्षुर्न विस्फारितं  
कोपश्च प्रकटीकृतो दयितया मुक्तश्च न प्रश्रयः ॥

(c) सिलोतसं वहति यो गगनप्रतिष्ठां  
ज्योतींषि वर्त्तयति च प्रविभक्तशिमः ।  
तस्य द्वितीयहरिविक्रमनिस्तमस्कं  
वायोरिमं परिवहस्य वदन्ति मार्गम् ॥

In Extract (c) account for cerebral प in ज्योतींषि and state when कम् takes आत्मनेपद. 2



7. Give in your own words the substance of the parting instructions imparted to Sakuntalā by Kaṇva and the message meant to be conveyed to Dushyanta. 8

8. (a) Explain clearly the two distinct senses contained in the following :— 4

लीलावधूतपद्मा कथयन्ती पक्षपातमधिकं नः ।

मानसमुपैति केर्यं चित्तगता राजहंसीव ॥

Analyse राजहंसी and चित्तगता—these two compounds. 2

(b) Paraphrase the following stanza, using as few of the words of the text as possible, and breaking up the compounds :— 6

मोहान्मया सुतनु पूर्वमुपेक्षितस्ते

यो बाष्पविन्दुरधरं परिबाधमानः ।

तन्तावदाकुटिलपक्ष्मविलग्नमद्य

बाष्पं प्रमृज्य विगतानुशयो भवेयम् ॥

Comment on सुतनु. Give the meaning of the word अनुशयः. 4

9. Translate the following into simple Sanskrit :— 25

(a) In his flight he comes to the house of Vasantasenā, and, finding the door open, rushes in. Vasantasenā inquires who he is, and what he wants. He then recites his story, and makes known to her that he was once in the service of Chārudatta, who discharged him on account of reduced circumstances. Hence he had been driven to seek a livelihood by gambling. The mention of Chārudatta at once secures Vasantasenā's aid. The gambler expresses his deepest gratitude.

(b) 'The misfortunes of our lives are but the results of our misdeeds; calamities are brought about by our sins.'

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts:— 15 × 2 = 30

(a) तत् श्रुत्वा कन्दर्पकेतुरमृतार्णवनिमग्नमिव सर्वानन्दानामुपरिवर्तमानमिवात्मानं मन्यमानो मन्दं मन्दमुत्थाय प्रसारितबाहुयुगल-स्तमालिकामालिलिङ्ग । अथ तथैव च सार्धं समासीनः, “किं करोति, किं वदति, कथमास्ते इत्यादि सकलं वासवदत्तावृत्तान्तमपृच्छत् । तं च दिवसं तसैवातिवाद्य तस्मात् प्रदेशात् तथा सहोद्यच्चाल समुहकन्दर्पकेतुः । अक्षान्तरे भगवानपि मरीचिमाली वृत्तान्तमिमं कथयितुमिव मध्यमं लोकमवततार ।

(b) तस्य चाम्बूदेवंविधस्य राज्ञो महिषी दिग्गजमदरेखेव आनन्दितालिङ्गाया पार्वतीव सुकुमारा चन्द्रलेखालङ्कृता च वनराजिरिव नवमल्लिकोज्जासिता सचिविका च अप्सरस्संहतिरिव संहतसुकेशो समञ्जुधोषा च सर्वान्तःपुरप्रधानभूता अनङ्गवती नाम । तयोश्च मध्यमोपन्ति वयमि वर्तमानयोः कथमपि दैववशास्त्रिभुवनविलोभनीयाकृतिः पुलोमतनयेवा- नन्दितासहस्रनेत्रा मेरुमेखलेव सुजातरूपा शरत्तिशेवोल्लसत्तारका सत्परिषदि- वाच्छिद्रद्विजपङ्क्तिभूषिता राक्षसकुललक्ष्मीरिव माल्यवत्सुकेशशोभिता तनयाभूत् ।

(c) ततः क्रमेण च रजोलुठितोत्थितकुलायार्थिपरस्परकलहविकल- कलविङ्ककुलकलकलवाचालशिखरेषु शिखरिषु वसतिसाकाङ्क्षेषु ध्वाङ्क्षेषु अनवरतदह्यमानकालागुरुधूपपरिमलोद्गारेषु वासागारेषु रोमन्थमन्थरकुरङ्ग- कुटुम्बकाध्यास्यमानम्रदिष्टवृष्टासु अरण्यस्थलीषु विहितसन्ध्यासमयव्यवस्थेषु गृहस्थेषु दिवसमहिषस्य रुधिरधारेव रक्तकमलिनीव गगनतटाकस्य मञ्जिष्टारागाहगपताकेव गगनहर्म्यस्थलस्य लक्ष्मीरिव स्वयंवरगृहीतपीताम्बरा भिक्षुकीव तारानुरागरक्ताम्बरधारिणो भगवती सन्ध्या समदृश्यत ।

2. Correct or justify the apparent or real irregularities in the following passages, raising the grammatical problems involved and giving full grammatical annotations and quotations of *sūtras* in support of your answer. Answer any four :— 16

- वृक्षं वृक्षं प्रतिपिञ्चति ।
- वनस्यानु नदी निर्गता ।
- यत्कृतेरीन्निग्रहीमः ।
- तुलां यदारोहति दत्तवाससा ।
- कलहं स राममहितः कृतवान् ।
- हरिर्यथैकः पुरुषोत्तमः स्मृतः ।

3. Can the following expressions be put in one compounded form? 9+3  
Adduce full grammatical reasons in support of your answer and state fully the grammatical problems involved. Attempt any three :—

- मृगीव चपला
- पञ्च गावः धनं यस्य सः
- ब्राह्मणी गर्भिणी
- वृक्षं प्रति

How do you distinguish grammatically between वनान्तः and अन्तर्घणम् ?

4. Explain the various ways in which a *samāsa* may be classified, 6+3  
illustrating your answer with examples and adducing full grammatical +3 reasons.

In a *सिपवबहुमीदि* are the first two *padas* compulsorily or option-

ally compounded in तत्पुरुष or द्वन्द्व, or is the लिपदबहुव्रीहि only to be admitted? Adduce grammatical reasons and five examples.

State the conditions under which a क्त प्रत्यय is enjoined.

5. Either, What are the different forms of Indian drama? Illustrate your answer with the names of surviving dramas and short descriptions wherever these may be necessary. 20

Or, Discuss the age of the Vedic literature.

6. Give an account of Sanskrit lyric poetry. 10

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Explain, in Sanskrit, the following couplets as an example of महायमक, showing the difference of the meanings of the same words in different couplets :— 15

अभियातोवरं तुङ्गं भूभृतं रुचिरं पुरः ।  
कर्कशं प्रथितं धाम ससत्त्वं पुष्करेक्षणम् ॥ क ॥  
अभियातो वरं तुङ्गं भूभृतं रुचिरं पुरः ।  
कर्कशं प्रथितं धाम ससत्त्वं पुष्करे क्षणम् ॥ ख ॥

Point out at least two words in the above which can be replaced by their synonyms without changing the sense and alliteration of the text.

2. Translate into English one only of the following verses, and give the substance of the other :— 15

(क) दुरुत्तरे पङ्क इवान्धकारे, मग्नं जगत् सन्ततरदिमरज्जुः ।

प्रनष्टमूर्त्तिप्रविभागमुद्यन्, प्रत्युज्जहारेव ततो विवस्वान् ॥

(ख) शैलेन्द्रशृङ्गेभ्य इव प्रवृत्ताः, पूराजलानां पुरमन्दिरेभ्यः ।

आपूर्य्य रथ्याः सरितो जनौघा राजाङ्गनाम्भोधिमपूरयन्त ॥

(a) Elucidate the points of similitude in either of the above verses, and explain the different forces of the two इव's in (क), showing how such differences constitute different figures of speech (अलङ्कार) in the same verse.

(b) Expound the samāsa in the underlined words of (क); justify or impugn Mallinātha's exposition of the underlined word in (ख) as an upamita samāsa (उपमित समास).

(c) Change the voice of (क). Give the लुङ्, third person singular forms of the root of

3. Quote, from Canto XI of *Bhṭṭikāvya*, a verse similar in sense to either of the following:— 8

(a) विपललेखा निरलक्तकाधरा, निरञ्जनाक्षीरपि विभ्रतीः श्रियम् ।  
निरीक्ष्य रामा बुबुधे नभश्चरैरलङ्कृतं तद्वपुषैव मण्डनम् ॥

(b) जातेयं भ्रमराभिलङ्घनभिया वाद्यैर्विना नर्त्तकी ॥

4. Refer to the context and explain in English either A or B:— 15

(A) यत्न च मलिनता हविर्धुमेषु मुखरागः शुकेषु तीक्ष्णता कुशाग्रेषु चञ्चलता कदलीदलेषु पक्षपातः कृकवाकुषु भ्रान्तिरनलप्रदक्षिणासु वसुसंकीर्त्तनं दिव्यकथासु गणना रुद्राक्षवलयेषु मुनिबालनाशः क्रतुदीक्षया मुखभङ्गविकारो जरया ॥

(B) यत्न च महाभारते शकुनिवधः पुराणे वायुप्रलपितं वयःपरिणामे द्विजपतनं उपवनचन्दनेषु जाड्यमग्नीनां भूतिमत्त्वं राणकानां गीतश्रवणव्यसनं शिखण्डिनां नृत्यपक्षपातो भुजङ्गमानां भोगः कपीनां श्रीफलाभिलाषो मूलानामधोगतिः ।

(a) Explain the double meaning (श्लेष) in every nominative (प्रथमान्त) word of either (A) or (B).

(b) Put in suitable words preceded by न, after all the non-nominative words in either A or B, as implied by the figure परिसंख्या.

5. Translate into English one only of the following :— 15

(a) सहस्रैव तस्मिन् महावने संलासितसकलवनचरः सरभसमुत्पतत्पतक्षिपक्षपुटशब्दसन्ततो भीतकरिपोतचीत्कारपीवरः प्रचलितकलाकुलितमत्तालिकुलक्वणितमांसलः परिभ्रमद्दुधोणवराहरवधरो गिरिगुहाप्रसुसप्रबुद्धसिंहनादोपबृंहितः कम्पयन्निव तरुन् भीतवनदेवताकर्णितो मृगयाकोलाहलध्वनिरुदचरन् ।

(b) अस्तमुपगते च भगवति सहस्रदीधितावपराणवतलाङ्गुलसन्ती विद्रुमलतेव पाटला सन्ध्या समदृश्यत । यस्यामावध्यमानध्यानमेकदेश-बुद्धमानहोमधेनुदुग्धधाराध्वनिमनोहरमग्निहोतवेदीविकीर्यमाणहरिकुशमृषिकुमारिकाभिरितस्ततो विक्षिप्यमाणदिग्देवताबलिसिक्तयमाश्रमपदमभवत् ।

What beauty is imparted to the style (रीति) of the passage (a) by the underlined words there?

6. Reproduce from *Kādambarī* an expansion and concrete illustration of the idea expressed by either of the following:— 7

(a) अहो प्रभावो महात्मनाम् । अहं हि शाश्वतिकमपहाय विरोधमुपशान्तात्मानस्तिर्यङ्मोऽपि तपोवनवसतिसुखमनुभवन्ति ।

(७) जितमपत्यस्नेहेन । सर्वसाधारणो ह्येष मोहग्रन्थिरन्तश्चर-  
श्चेतनावतामनुपल्लवः संसारतन्तुः ।

7. Translate into Sanskrit either (a) or (b):—

25

(a) He paused: the listening dames again  
Applaud the hoary Minstrel's strain.  
With many a word of kindly cheer,  
In pity half, and half sincere,  
Marvelled the Duchess how so well  
His legendary song could tell  
Of ancient deeds, so long forgot;  
Of feuds, whose memory was not;  
Of forests now laid waste and bare;  
Of towers which harbour now the hare;  
Of manners, long since changed and gone;  
Of chiefs who under their grey stone  
So long had slept, that sickle Fame  
Had blotted from her rolls their name,  
And twined round some new minion's head  
The fading wreath for which they bled.

(b) Of the provinces which had been subject to the house of Tamerlane, the wealthiest was Bengal. No part of India possessed such natural advantages, both for agriculture and commerce. The Ganges, rushing through a hundred channels to the sea, has formed a vast plain of rich mould which, even under the tropical sky, rivals the verdure of an English April. The rice fields yield an increase such as is elsewhere unknown. Spices, sugar, vegetable oils are produced with marvellous exuberance. The rivers afford an inexhaustible supply of fish. The great stream which fertilizes the soil is, at the same time, the chief highway of Eastern commerce. On its banks and on those of its tributary waters, are the wealthiest marts, the most splendid capitals, and the most sacred shrines of India. The tyranny of man had, for ages, struggled in vain against the overflowing bounty of nature.

#### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*SEVEN questions only are to be attempted, of which Question 1 is compulsory*

1. Render any four of the following into English, showing in brackets the original words after their equivalents in your translation :— 16

(a) मित्रो जनान्यातयति ब्रुवाणो

मित्रो दाधार पृथिवीमुत द्याम् ।

मित्रः कृष्टीरनिमिषाभि चष्टे

मित्राय हव्यं धृतवज्जुहोत ॥

- (b) अयं मित्रो नमस्यः सुशेवो  
 राजा सुक्षतो अजनिष्ट वेधाः ।  
 तस्य वयं सुमतौ यज्ञियस्या-  
 पि भद्रे सौमनसे स्याम ॥
- (c) यं क्रन्दसी संयती विह्वयेते  
 परेऽवर उभया अमिताः ।  
 समानं चिद्रथमातस्थिवांसा  
 नाना हवेते स जनास इन्द्रः ॥
- (d) यस्मान्न ऋते विजयन्ते जनासो  
 यं युध्यमाना अवसे हवन्ते ।  
 यो विश्वस्य प्रतिमानं बभूव  
 यो अच्युतच्युत्स जनास इन्द्रः ॥
- (e) यस्य स्त्री पूर्णा मधुना पदान्य्  
 अक्षीयमाणा स्वधया मदन्ति ।  
 य उ तिधातु पृथिवीमुत ग्राम्  
 एको दाधार भुवनानि विश्वा ॥
- (f) तदस्य प्रियमभि पाथो अज्ञ्यां  
 नरो यत्त देवयवो मदन्ति ।  
 उरुक्रमस्य स हि बन्धुरित्था  
 विष्णोः पदे परमे मध्व उत्सः ॥

2. (a) Name and specify the characteristics of the metres of the above six Rks. 14

(b) Re-write Rk (e) in the Pada form, showing the proper accents.

3. Write notes on :—

14

(a) पञ्चजनाः । (b) शम्बर । (c) रौहिण । (d) अभिष्टिशवस्  
(e) अनमीव । (f) मितज्ञु । (g) वरिमन् ।

4. (a) Paraphrase the following into classical Sanskrit :—

14

न स स्वो दक्षो वरुण ध्रुतिः सा

सुरा मन्युर्विभीदको अचित्तिः ।

अस्ति ज्यायान्कनीयस उपारे

स्वप्नश्चनेदनुतस्य प्रयोता ॥

(b) Describe the characteristics of Varuṇa and show what position he occupies in the R̥gvedic pantheon.

5. Translate the following into intelligible English :—

14

द्वितीयेनुवाक एकादश सूक्तानि । तस्य यो जात इति पञ्चदशत्वं  
प्रथमं सूक्तं गार्त्समदं वैष्टभमैन्द्रम् । संसवे निष्केवल्ये निविद्धानीयस्य  
पुरस्ताद्यो जात एवेति शंसेत् । यदि पर्यायानिति खण्डे सूक्षितम् ।  
यो जात एवेति निष्केवल्य इति । आभिष्टुविके तृतीयेहनि निष्केवल्ये  
यो जात एवेति निविद्धानीयम् । सूक्षितं च । तृतीयस्य त्र्ययमा यो  
जात एवेति मध्यन्दिन इति विश्वजिति माध्यन्दिनसवने मैसावरुणः स्वशस्त्रे  
प्राकृतात्सूक्तात्पूर्वं यो जात इति सामसूक्तं शंसेत् । विश्वजितोऽग्निं नर  
इति खण्डे सूक्षितम् । सखा मदासो सो जात एवाभूरेक इति साम-  
सूक्तानीति । अग्निष्टुप्निष्केवल्ये निविद्धानमिदम् । श्येनाजिराभ्यामिति  
खण्डे सूक्षितम् । तिष्ठा हरी इति यो जात एवेति मध्यन्दिन इति । महा-  
व्रते निष्केवल्ये यो जात एवेति सूक्तम् । ऊरु इति खण्डे सूक्षितम् । वने  
न वा यो न्यधायि चाकन् यो जात एव प्रथमो मनस्वानिति ।

6. Annotate all the important words and names occurring in Question 5, tracing as far as practicable the quotations contained in it. 14

7. Comment on the peculiar forms of Vedic grammar occurring in any four of the R̥ks cited in Question 1. 14

8. (a) Decline देव and व्योमन् according to Vedic grammar. 14

(b) What are the different methods of expressing the infinitive mood in Vedic language?

(c) Indicate the uses of the Vedic subjunctive.

9. 'What renders these (R̥gvedic) hymns so valuable for us is that we see before us in them a mythology in the making.' Explain. 14

10. Describe 'the geographical and cultural conditions of the time' to which the hymns belong. 14

## SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## GROUP A

*Answer any FOUR questions from GROUP A*

1. Explain the following *sūtras* with examples :

5

- (a) शेषो बहुव्रीहिः ।  
(b) साधकतमं करणम् ।  
(c) कर्त्तरि च ।  
(d) स नपुंसकम् ।  
(e) प्रथमानिर्दिष्टं समास उपसर्जनम् ।

2. (a) Both जनिकर्तुः प्रकृतिः and भुवः प्रभवः involve the idea of evolution from a source. What, then, makes the difference between these two rules ? Give the meanings of *prakṛti* and *prabhava*. 15

- (b) Explain fully—इहान्तर्भूतोपसेकक्रियाद्वारा सामर्थ्यम् ।

3. Comment on any three of the following, with reference to the rules :— 15

- (a) अर्थनिबन्धनेयं संज्ञा ।  
(b) प्रत्ययार्थे परिमाणे प्रकृत्यर्थोऽभेदेन संसर्गेण विशेषणम् ।  
(c) अनित्योऽयं गुणेन निषेधः । तदशिष्यं संज्ञाप्रमाणत्वादित्यादि-निर्देशात् ।  
(d) बहुलग्रहणात् क्वचित् — रामो जामदग्न्यः ।  
(e) कर्मैत्यनुवृत्तौ पुनः कर्मग्रहणमाधारनिवृत्त्यर्थम् ।

4. Correct or justify any five of the following, giving reasons in each case :— 15

- (a) ऋद्धस्य राजमातङ्गाः ।  
(b) रक्षोहागमलध्वसंदेहाः प्रयोजनम् ।  
(c) राज्ञे निवेदयति ।  
(d) मम प्रतिभाति ।  
(e) आश्चर्यो गोदोहोऽगोपेन ।  
(f) धावतोऽश्वात् पतितः ।  
(g) नटात् गाथां शृणोति ।

5. (a) Do you consider a compound formed with an adverb wholly ungrammatical ? Can you support *samāsa* in स्तोकनम्रा ? 15



(b) What is कर्मप्रवचनीय ? How do you distinguish it from *upasarga* ? Explain इयमेव ह्यपि शब्दस्य पदार्थद्योतकता नाम ।

6. (a) Give, after Bhaṭṭoji, the meanings of the following expressions, and account for the case-endings :— 15

अक्षणा काणः । जटाभिस्तापसः । हरये रोचते भक्तिः । अलं श्रमेण ।  
अधीती व्याकरणे ।

(b) Show why the fourfold classification of *samāsa* is far from being exhaustive ( समासश्चतुर्विध इति तु प्रायोवादः ).

### GROUP B (*Alaṅkāra*)

Answer any FOUR questions from GROUP B

7. Define and illustrate any four of the following :— 10

उपक्षेपः । आख्यानम् । अभिनयः । बीजम् । विष्कम्भकः ।  
प्रस्थानम् ।

8. (a) Do you fully agree with Daṇḍin when he asserts that the slightest defect (*doṣa*) should not be even tolerated in a poetical composition ? Give reasons for your answer. 10

(b) Elucidate वाचामेव प्रसादेन लोकयात्रा प्रवर्तते ।

9. Discuss the *alaṅkāras* in the following :— 10

(a) अयं मन्दद्युतिर्भास्वानस्तं प्रति यियासति ।

उदयः पतनायेति श्रीमतो बोधयन्नरान् ॥

(b) आदिराजयशो बिम्बमादर्शं प्राप्य वाङ्मयम् ।

तेषामसन्निधानेऽपि न स्वयं पश्य नश्यति ॥

(c) पुरोपनीतं नृप ! रामणीयकं द्विजातिशेषेण यदेतदन्धसा ।

तदद्य ते वन्यफलाशिनः परं परैति काश्चिं यशसा समं वपुः ॥

10. Explain and illustrate :— 10

(a) आदौ नमस्क्रियाशीर्वा वस्तुनिर्देश एव वा ।

(b) सर्गान्ते भाविसर्गस्य कथायाः सूचनं भवेत् ।

11. (a) Explain the difference between व्याजस्तुतिः and अप्रस्तुतप्रशंसा. 10

(b) Comment on काव्यं कल्पान्तरस्थाधि जायेत सदलंकृति.

B.A. EXAMINATION

SANSKRIT—PASS

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FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English two *ślokas* from Group A, ONE *śloka* from Group B, and two *ślokas* from Group C :—

22  
(10 +  
4 + 8)

GROUP A

- (a) महामहानीलशिलारुचः पुरो निषेदिवान् कंसकृषः स विष्टरे ।  
भित्तोदयाद्वेरभिसायमुषकैरवूषुरचन्द्रमसोऽभिरामताम् ॥
- (b) निदावधामानमिवाधिदीधितिं मुदा विक्राशं मुनिमभ्युपेयुषी ।  
विलोचने विभ्रदधिभितभिणी स पुण्डरीकाक्ष इति स्फुटोऽभवत् ।

- (c) परस्य मर्माविधमुज्झतां निजं द्विजिह्वातादोषमजिह्वागामिभिः ।  
तमिदमाराधयितुं सर्गकैः कुलैर्न भेजे फणिनां भुजङ्गता ॥

## GROUP B

- (a) यद्वासुदेवेनादीनमनादीनवमीरितम् ।  
वचसस्तस्य सपदि क्रिया केवलमुत्तरम् ॥
- (b) समूलघातमग्नन्तः पराङ्मोहयन्ति मानिनः ।  
प्रध्वंसितान्धतमसस्तखोदाहरणं रविः ॥

## GROUP C

- (a) श्रुतिद्वैधं तु यत् स्यात्तत् धर्मावुभौ स्मृतौ ।  
उभावपि हि तौ धर्मौ सम्प्रगुक्तौ मनीषिभिः ॥
- (b) दशाब्दाख्यं पौरसख्यं पञ्चाब्दाख्यं कलाभृताम् ।  
त्र्यब्दपूर्वं श्रोत्रियाणां स्वल्पेनापि स्वयोनिषु ॥
- (c) संमानाद्वाह्यगो नित्यमुद्विजेत विषादिव ।  
अमृतस्येव चाकाङ्क्षेदवमानस्य सर्वदा ॥

2. (a) Derive निषेदिवान् and समूलघातम्. 3  
(b) Explain the formation of each of the three —  
विष्टरे, मर्माविधम् and अन्धतमसः .  
(c) Expound the samāsa in अधिश्रितश्रिणी in 1 A (b) and give its 3  
nominative singular form.  
(d) How does Manu illustrate the principle underlying 1 C (a)? 2  
(e) Give a suitable synonym for आदीनव. 1
3. Comment on any two of the following :— 8  
(a) मौनात् सत्यं विशिष्यते ।  
(b) एकादशं मनो शेषं स्वगुणेनोभयात्मकम् ।  
(c) ब्रह्मजन्म हि विप्रस्य प्रेत्य चेह च शाश्वतम् ।
4. Annotate either of the following ślohas :— 8  
(a) उदेतुमत्यजन्नीहां राजसु द्वादशस्वपि ।  
जिगीषुरेको दिनकृदादित्येष्टिव च कल्पते ॥  
(b) व्रतवहेवदैवत्ये पित्र्ये कर्मण्यथर्षिवत् ।  
काममभ्यर्थितोऽश्नीयाद्भ्रतमस्य न लुप्यते ॥

5. Give, in simple Sanskrit sentences of your own, the substance of 8  
one of the following ślohas :—

- (a) ह्यस्यैव संप्रति हेतुरेष्टतः शुभस्य पूर्वाचरितैः कृतं शुभैः ।  
क्षरोरभाजां भवदीयदर्शनं व्यनक्ति कालक्षितयेऽपि योग्यताम् ॥

(b) सम्पदा सुस्थिरम्मन्यो भवति स्वल्पयापि यः ।

कृतकृत्यो विधिर्मन्ये न वर्धयति तस्य ताम् ॥

(c) तीक्ष्णा नारुन्तुदा बुद्धिः कर्म शान्तं प्रतापवत् ।

नोपतापि मनः सोष्म वागेका वाग्मिनः सतः ॥

Derive **एष्यतः** and give the third person singular **लुङ्** form of its root. Indicate the context of (b). 4

6. (a) Explain any *two* of the following terms :— 4

**ब्रह्माञ्जलि, ब्राह्मतीर्थ and उपाध्याय.**

(b) Write notes on (i) the proper age of *upanayana*, and (ii) the relative value of the conditions entitling a man to respect. 6

7. Translate into Sanskrit any *three* of the following extracts :— 25

(a) As a fire in one moment consumes with its bright flame the fuel that has been placed on it, even so he who knows the Veda destroys all guilt through the fire of knowledge.

(b) Let him bathe three times each day and thrice each night, in his clothes; let him on no account neglect the special duties of a *snātaka*.

(c) Let him not dwell together with the murderers of children, with those who have returned evil for good or with the slayers of suppliants for protection.

(d) Austerity and sacred learning are the best means by which a Brāhmana secures supreme bliss; by these two he destroys guilt and obtains the cessation of births and deaths.

(e) Command of armies, royal authority, the office of a judge, and sovereignty over the whole world, he only deserves who knows the Veda-science.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Point out and explain the virtuous and noble traits in the character of Duṣṣyanta as revealed in the Fifth Act of *Sakuntalā*. 19

*Or*, Show by apt reference that *Sakuntalā* was a pet of the entire *eylvan* home of Kaṇva, man and nature.

2. *Either*, Explain from the dramatic point of view the mission of *Sā numatī* (or *Mīśrakeśi*) as set forth in the Sixth Act of *Sakuntalā*. 10

*Or*, Explain, stage by stage, how Duṣṣyanta was helped into recognition of his unknown son.

3. *Either*, Explain in English any *three* of the following :— 18

(a) शान्तिमिदमाश्रमपदं हफुरति च बाहुः कुतः फलमिहास्य ।

अथवा भवितव्यानां द्वाराणि भवन्ति सर्व्वस्य ।

- (b) शमप्रधानेषु तपोधनेषु  
गृहं हि दाहात्मकमस्ति तेजः ।  
स्पर्शानुकूला इव सूर्यकान्ता-  
स्तदन्यतेजोऽभिभवाद्भवन्ति ॥
- (c) पृष्टा जनेन समङ्गः स्वसुखेन बाला  
नेयं न वक्ष्यति मनोगतमाधिहेतुम् ।  
दृष्टो विवृत्य बहुशोऽप्यनया सनृष्ण-  
मत्नान्तरे श्रवणकातरतां गतोऽस्मि ॥
- (d) यस्य त्वया व्रणविरोपणमिङ्गुदीनां  
तैलं न्यषिच्यत मुखे कुशसूचिविद्धे ।  
श्यामाकमुष्टिपरिवर्द्धितको जहाति  
सोऽयं न पुत्रकृतकः पदवीं मृगस्ते ॥
- (e) भानुः सकृद् युक्तुरङ्ग एव  
राखिन्दिवं गन्धवहः प्रयाति ।  
शेषः सदैवाहितभूमिभारः  
पष्ठांशवृत्तेरपि धर्म एषः ॥
- (f) येन येन वियुज्यन्ते प्रजाः रतिगन्धेन बन्धुना ।  
स स पापादृते तासां दुष्यन्त इति घुष्यताम् ॥
- (g) वसने परिधूसरे वसाना  
नियमक्षाममुखी धृतैकवेणिः ।  
अतिनिष्करुणस्य शुद्धशीला  
मम दीर्घं विरहव्रतं बिभर्त्ति ॥

Or, Explain in Sanskrit any two of the following :—

- (a) अध्याक्रान्ता वसतिरमुनाप्याश्रमे सर्व्वभोग्ये  
रक्षायोगादयमपि तपः प्रत्यहं सञ्चिनोति ।  
अस्यापि द्यां स्पृशति वशिनश्चारणद्वन्द्वगीतः  
पुण्यः शब्दो मुनिरिति मुहुः केवलं राजपूर्व्वः ॥
- (b) महाभागः कामं नरपतिरभिज्ञस्थितिरसौ  
न कश्चिद्वर्णानामपयमपकृष्टोऽपि भजते ।  
तथापीदं शश्वत्परिचितविविक्तेन मनसा  
जनाकीर्णं मन्ये हुतवहपरीतं गृहमिव ॥

- (c) प्राहुर्द्वादशधा स्थितस्य मुनयो यत्तेजसः कारणं  
भर्तारं भुवनत्रयस्य सुषुवे यद् यज्ञभागेश्वरम् ।  
यस्मिन्नात्मभवः परोऽपि पुरुषश्चक्रे भवायास्पदं  
द्वन्द्वं दक्षमरीचिसम्भवमिदं तत्सष्टुरेकान्तरम् ॥

4. Either, Explain Yangandharāyana's diplomacy in all its aspects as revealed in *Ratnāvalī* 10

Or, Contrast the characters of Vāsavadattā and Ratnāvalī in the same drama.

5. Either, Translate into English any two of the following :— 10

- (a) दुल्लहजणअणुराओ लज्जा गुरुई परव्वसो अप्पा ।  
पिअसहि बिसमं पेम्मं मरणं सरणं णु वरमेव्वं ।  
(b) लीळावधूतपद्मा कथयन्ती पक्षपातमधिकं नः ।  
मानसमुपैति केयं चित्तगता राजहंसीव ।  
(c) आरुह्य शैलशिखरं तद्वदनापहतकान्तिस्वर्वस्वः ।  
प्रतिकर्तुमिवोद्धरः स्थितः पुरस्तान्निशानाथः ॥

Or, Explain (a) or (b) in the following (either in English or in Sanskrit) :—

- (a) नष्टं वर्षवरैर्भुज्यगणनाभावादपास्य तृपा-  
मन्तः कुञ्चुकिकञ्चुकस्य विशतिं खासादयं वामनः ।  
पर्यन्ताश्रयिभिर्निजस्य सदृशं नाम्नः किरातैः कृतं  
कुञ्जा नीचतयैव यान्ति शनकैरात्मेक्षगाशङ्किनः ॥  
(b) विवृद्धिं कम्पस्य प्रथयतितरां साध्वसवशा-  
दविस्पष्टां दृष्टिं तिरयतितरां बाष्पपटलैः ।  
स्वलक्ष्मणां वाणीं जडयतितरां गद्वदतया  
जरायाः साहाय्यं मम हि परितोषोऽयं कुस्ते ॥

6. Write grammatical notes on any five of the underlined expressions 15  
in Questions 3 and 5.

भवितव्यानाम्, पुत्रकृतकः, रात्रिन्दिवम्, धृतैकवेणिः, प्रत्यहम्,  
अपथम्, पिअसहि, पुरस्तात्, आश्रयिभिः, शनकैः, प्रथयतितराम्,  
तिरयतितराम्.

7. Translate into Sanskrit :—

25

The old times are gone, gone for ever; they will never return. The world is changing every moment before us. Old customs, old systems must change. Nothing human is permanent, and probably nothing divine is also permanent with regard to this world. Why fight shy of changes? Life grows in changes—healthy changes. Don't decry the reformers. When reforms are proposed, see that they suit you as a community. If there are defects, point them out clearly and publicly. The people as a whole will judge everything aright. Man, as man, is gifted with that instinct. Have faith in that gift—a divine gift.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## GROUP A

1. Translate into English two of the following extracts :—

(a) देव भवतः श्रुतिपथमागतैव विन्ध्याटवी यदेकदेशे दण्डकारण्ये ससीतौ रामलक्ष्मणावुषितौ । यत्र चागस्त्यमुनेः पावनमाश्रमपदं वर्तते, यस्योपकण्ठे पुण्यसलिलं पम्पाख्यं सरोऽस्ति । तस्य पश्चिमे तीरे जीर्णः शास्त्रमलि-पादप-व्याप्तव्योमदिगन्तरो वर्तते । तस्मिन् कृतकुलायानि विहङ्गमसहस्राणि निवसन्ति । दिवा यत्र कुत्तापि प्राणयात्रां निर्वर्त्य रात्रौ स्वनीडेषु सुखं शेरते । तस्मिन्नेव वृक्षे जायया सह वर्तमानस्य परिणतवयसः पितुरहमेवैकः सूनुरभवम् ।

(b) कापालिक उवाच—“मा भैषीः, पुत्रस्ते न मरिष्यति, शिवप्रसादेन गृहमेष्यति, परं श्मशानभूमौ बुद्धिसागरेण सह होमद्रव्याणि प्रेषय” — इति । ततो राजा “कापालिकेन यदुक्तं तत्सर्वं कुरु” इत्युक्त्वा बुद्धिसागरः प्रेषितः । ततो रात्रौ गृहरूपेण भोजोऽपि नदीपुलिने नीतः । योगिना भोजो जीवित इति च वार्ता लोकेषु प्रसृता । ततो गजेन्द्राधिरूढो बन्दिभिः स्तूयमानो भेरीमृदङ्गादिनिनादेन दिशो बधिरयन्पौरामात्यपरिवृतो भोज-राजो राजभवनमगात् । राजापि तमालिङ्ग्य प्रारोदीत् । भोजोऽपि रुदन्तं मुञ्चं न्यवारयत् ।

(c) हिमालये तपस्यतो जिष्णोराश्रमं पाकशासनो द्वाधीयसाध्वना परिक्रान्त इव मुनिरूप आजगाम । तं दृष्ट्वा पृथासूनूर्महर्षो मुदमवाप । हरिरजुनादातिथेयीमपचितिमासाद्य परिश्रममपनीय व्याजहार । साधुरयं तव समारम्भो यन्नवेऽपि वयसि तपश्चरसि । मादृशो वर्षीयानपि प्रायो विषयैर्हिंयते । शोभनेयं तवाकृतिः श्रेयसीं गुणसम्पदं संप्राप्ता । लोके हि रम्यता सुलभा, गुणार्जनं पुनर्दुर्लभम् । यौवनं शरदम्बुधरवत्त्वरं, विषयाश्चापातरमणीयाः परिणामविरसाः । सततमापन्निः परिक्लिश्यमानस्य प्राणिनोऽन्तकः शत्रुः ।

2. (a) Form *sandhi* in any three of the following :—

प्राक् + मुष्मत् ; चल् + टिड्भिः ; महान् + कामः ; हरी + अश्वौ ।

(b) Decline any three of the following :—

3

लक्ष्मी in प्रथमा (singular); नामन् in द्वितीया (dual); अनङ्ग in पञ्चमी (dual); राजन् in सप्तमी (singular); धनिन् in संबोधन (singular).

(c) Conjugate any three of the following :—

6

अस् (to be) in लट्; क्री in लोट्; आस् in लिट्; गृह् in लुङ्; या in ङङ्; वृत् in विधिलिङ् (all in the third person).

(d) Derive any four of the following :—

4

प्रेष्टः; आत्तम्; शयानः; युयुधानः; विदुषी; क्षेपिष्टः; हास्तिकम्।

(e) Dissolve the *samāsas* in any four of the following, naming and explaining the nature of the compound in the case of each :—

12

दुःखातीतः; युधिष्ठिरः; चित्रगुः; गोनसः; अहिनकुलम्; आमुक्तिः; अनुगङ्गम्।

3. Correct or justify any four of the following, giving your reasons for corrections :—

12

- ताः स्त्रिय आत्मनो निन्दन्ति ।
- क्रुद्धः पुरुषः शिलायामप्यधिशेते ।
- रामस्य पूर्व गोविन्द आगच्छतु ।
- भिक्षुकं श्रेष्ठिनं धनं याचयति ।
- दिवसे त्रिः सन्ध्यामुपासीत ।
- अयं मम चिरन्तनो वयसो भवितव्यः ।

### GROUP B

( Attempt any THREE questions )

1. ' In any case, our Mahābhārata is not only the heroic poem of the battle of the Bhāratas, but at the same time also a *repertory* of the old bard poetry.' Explain briefly.

10

2. Discuss 'the date of the Rāmāyaṇa'.

10

3. What is in your opinion 'the exact position of the Purāṇas in the history of Indian literature, both according to contents and chronologically'?

10

4. Give a brief account of the development of the Historical Kāvya literature.

10

5. Write a note on the literature of the Popular Tale.

10



## PĀLI—HONOURS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any four of the following stanzas into idiomatic English 16  
adding short explanatory notes where necessary :—

- (a) Yathā saṅkārādhānasmīṃ ujjhitasmiṃ mahāpathe |  
padumam tattha jāyetha sugandham manoramam ||  
Evaṃ saṅkārābhūtesu andhabhūte puthujane !  
atirocati paṇḍāya sammāsambuddha-sāvako||
- (b) Gahakāraka diṭṭho 'si puna pehaṃ na kāhasi |  
sabbā te phāsukā bhaggā gahakūṭam visāṅkhatum |  
visaṅkhāragatam cittam taphānam khayam ajjhagā||
- (c) Vanam chindatha mā rukkham vanato jāyati bhayam |  
chetvā vanam vanathan ca nibbanā hottha bhikkhavo||
- (d) Tato kumāram jalitam iva suvaṇṇam |  
ukkāṇukhe' va sukusala-sampa haṭṭham||  
Dadallamānam siriya' anomaṇṇam |  
dassesum puttam Asitavhayassā Sakyā||
- (e) Ekam carantam munim appamattam |  
nindā pasamsasu avedhamānam||  
Siham' va saddeṣu asantasantam |  
vātam' va jālamhi asajjamānam||  
Padumam' va toyena alippamānam |  
netāram aññesam anaññaneññam||  
Tam vā' pi dhīrā munim vedayanti||

2. Explain in Pāli any two of the following stanzas :—

12

- (a) Akāse ca padam n'atthi, samaṇo n'atthi bahiro |  
papañcābhīratā paṇā, nippapañcā Tathāgatā||
- (b) Chetvā nandim varattam ca sandānam sahanukkamanam |  
Ukkhittapaligham buddham tam abam brūmi brāhmaṇam||
- (c) Yo uppatitam kodham visataṃ sappavisam'va osadhehi |  
so bhikkhu jahāti orapāram urago jippsam iva tcam purāṇam||

3. *Either*, Discuss the importance of similes and metaphors as figures of speech or literary ornaments, showing by actual citations of instances from your texts how far proper use has been made of them. 10

Or, Discuss the literary importance of the *Vatthugāthās* of the *Nālakasutta* as a type of composition, indicating how it differs from the general bulk of *Pāli gāthās* in the *Pitakas*.

4. Give the substance of the *Appamādevagga* of the *Dhammapadam* 10 discussing the questions whether its teaching constitutes the quintessence of Buddhism as well as of Aśoka's *Dhamma*.

5. What are the data for determining the date of compilation 12  
 EITHER of the *Suttanipāṭa* OR of the *Dhammapadam*?

6. Comment on the general ethical principles and ideals of Buddhism as inculcated in your texts, substantiating your answer with actual citations. 10

7. Translate the following extract into idiomatic English :— 30

Mā jātiṃ puṇṇa carāṇaṃ ca puṇṇa, kaṭṭhā have jāyati jātibhedo—  
 nicā kulīno' pi muni ubhitaṃ ājāniyo hoti hirinisedho||  
 Saccena danto, dama-ā upeto, Vedantaḡ vasiṭabrahma cariyō |  
 kālena tamhiṃ havyaṃ pavacce yo brāhmaṇo puṇṇaṃ pekkho ya'eṭha||  
 Ye kāme hitvā agahā caranti susaṇṇatattā tasaraṃ' va ujjuṃ |  
 kā'ena tesu havyaṃ pavacce yo brāhmaṇo puṇṇaṃ pekkho ya'eṭha||  
 Ye vītarāḡ susaṇṇābhūtiniyā caṇḍo'va Rābughahaṇā pamuttā |  
 kālena tesu havyaṃ pavacce yo brāhmaṇo puṇṇaṃ pekkho ya'eṭha||

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into idiomatic English any *two* of the following extracts, 18  
adding explanatory notes where necessary :—

(a) Rājā āha : “ Kimatthiyā bhante Nāgasena tumhākaṃ pabbajjā, ko ca tumhākaṃ paramattho ” ti. Thero āha : “ Kin ti mahā-rāja idañ dukkhaṃ nirujjheyya aññañca dukkhaṃ na uppajjeyyā ti etadatthā mahārāja amhākaṃ pabbajjā, anupadā parinibbānaṃ kho pana amhākaṃ paramattho ” ti “ Kim pana bhante Nāgasena sabbe etadat-thāya pabbajanti ” ti “ Na hi mahārāja. keci etadatthāya pabbajanti, keci rābhiniṭṭā pabbajanti, keci corābhiniṭṭā pabbajanti, keci inattā pabbajanti, keci ājivikatthāya pabbajanti; ye pana sammā pabbajanti te etadatthāya pabbajanti.

(b) Attthi me bhante Nāgasena koci attho tumhehi saddhiṃ māntayitabbo, na tatha añño koci tatiyo icchitabbo, suññe okāse pavivitte araññe atthaṅgupāgate samapaśruppe, tatha so pañño pucchitabbo bhavissati, tuppa me guyhaṃ na kātabhaṃ na rahassaṃ, araham' ahaṃ rahassaṃ suṇitūṃ sumantaṃ upagata. Upamaṃ pi so attho upaparikkhitabbo, yathā kiṃ viya : yathā nāma bhante Nāgasena mahā paṭhavi nikkhepaṃ arahati nikkhepe upagata, evaṃ eva kho bhante Nāgasena araham' ahaṃ rahassaṃ suṇitūṃ sumantaṃ upagata ti.

(c) Dasa ime mahārāja upāsakassa upāsakagupā, katame dasa :  
idha mahārāja upāsako saṅghena samānasukhadukkho hoti, dhammādhī-  
pateyyo hoti, yathāharam samvibhāgarato hoti, Jinassānanaparibhānīṃ

disvā abhivaḍḍhiyā vāyamati, sammādiṭṭhiko hoti, apagatakotūhalamaṅga-liko jīvitaheṭu pi na aññaṃ satthāraṃ uddisati, kāyikaṃ vācasikaṃ c'assa rakkhitaṃ hoti, samaggārāmo hoti samaggarato, anusuyyako hoti, na ca kuhanavasena sāsaṇe carati, Buddhaṃ saraṇaṃ gato hoti, dhammaṃ saraṇaṃ gato hoti, saṅghaṃ saraṇaṃ gato hoti ti.

(d) Sutipubbāṇi pana tayā mahārāja Nandako nāma yakkho therāṃ Sāriputtaṃ āsādayitvā pathaviṃ pavittḥo" ti. "Āma bhante, sūyati, loke pākaṭo eso" ti "Api nu kho mahārāja therō Sāriputto sādīyi Nandakassa yakkhassa mahāpaṭhavigīlanam" ti. "Ubbattiyante pi bhante saderake loke, patamāne pi chamāyaṃ candimasurive, vikirante pi Sinerupabbatarāṇe, therō Sāriputto na parassa dukkhāṇi sādīyeyya, taṃ kissa heṭu : yena heṭunā therō Sāriputto kujjheyya vā dusseyya vā so, heṭu therassa Sāriputtassa samūhato samurchinno, heṭuno samugghātittā bhante therō Sāriputto jīvitaḥarake pi kopāṇi na kareyyā" ti.

2. (a) Comment on any two of the forms—*kimatthiyā*, *etadatthā*, and *anupādā* in (a) in Question 1. 1

(b) What is the force of the term *upagata* in 1 (b)? Can you give an instance where it is used in any other sense? 1

(c) Name some famous Buddhist *upāsaka*, other than Milinda, who was equally endowed with the *upāsakagunā* enumerated in 1 (c). 1

(d) Briefly allude to the incident referred to in 1 (d), and name, if you can, the text where it is related. 3

(e) Expound the *samāsa* in one of the following:—*dhammādhipateyyo* in 1 (c), and *mahāpaṭhavigīlanam* in 1 (d). 1

3. Comment on any three of the following expressions, adding etymological notes:—*aticchatha bhante*, *gālhaṃ kacchaṃ bandhivā*, *imāṇi cha chakkāni*, *paṭigace' eva*, *ājānāhi nigghaṃ*, and *kelāyatha mamāyatha*. 6

4. Give Nāgasena's reply to one of the following questions, together with the similes employed, adding your own observations thereon:— 10

(a) *Atthi keci saṅkāra ye abhavantā jāyanti ti?*

(b) *Yassa āṇaṃ uppannaṃ tassa paññā uppannā ti?*

5. Explain any two of the following terms or expressions, fully bringing out their connotation:—*nagaraguttiko*, *saṅghassa āramiko*, *nagara-vaḍḍhaki*, *caturāṅginīyā senāya*, *rañño cakkavattissa bhaṇḍāgārīko*, and *rañño cakkavattissa parimāyakaratanam*. 6

6. Amplify, in your own Pāli, ONE of the following statements:— 6

(a) "Iti pubbe mahārāja sabbeṇa sabbaṃ sabbathā sabbuṃ avijjā nāhoṣi ti."

(b) "Yaṃ tattha mahārāja olārikaṃ, etaṃ rūpaṃ; ye tattha sukumaṃ cittacetasiṅga dhammā, etaṃ nāmaṇ ti."

7. Either, Give a critical estimate of the *Dhammapada Commentary* from as many aspects as you can. 10

Or, 'The work (i.e. the *Milindapañha*), as it stands in the Pāli, is of its kind the best in point of style that had then been written in any country, and...it is the masterpiece of Indian prose.' Discuss.

8. Relate the story alluded to in one of the following stanzas:— 7

(a) *Pamādaṃ appamāḍena yadā nudati paṇḍito |  
paññāpāsādam āruhya asoko sokiniṃ pajam |  
pabbataṭṭho va bhummaṭṭhe dhīro bāle avekkhati||*

(b) *Appamatto pamattesu suttesu bahujāgaro |  
abalassaṃ vā sīghasso hitvā yāti sumedhaso||*

## 9. Translate into idiomatic English :—

30

Atīte Bodhisatto agatigamanāṃ paḥāya dasa rājadharmme ekopento dhammena rejjamāṃ karesi. Evaṃ sante pi 'ssa vinicchayo suñño viya ahoṣi. Rājā attano agunagavesako hutvā antonivesanādini parigaḥhanto antopure ca antonagare ca dīragāmesu ca attano agunāṃ kathentaṃ adisvā "janapāde gavesissāmi" ti amaccānaṃ rajjāṃ niyyādetvā purohitena saddhīm aññātakavesena Kāsiraṭṭhe caranto kañci agunāṃ kathentaṃ adisvā paccante ekaṃ nigamaṃ patvā bahidvārasālāya nisīdi. Tasmīm khaṇe nigamavāsi asitikoṭṭivibhavo kuṭumbiko mahantena parivārena nabānatitthaṃ gacchanto sālāya nisinnaṃ suvaṇṇavannaṃ sukhumāla-sariraṃ rājānaṃ disvā uppannasineho sālāṃ pavisitvā "idh' eva hoṭhā" ti vatvā gehaṃ gantvā nānaggarasabhojanaṃ sampādāpetvā mahantena parivārena bhattabhājānāni gāhāpetvā agamāsi. Tasmīm khaṇe Hinavan-tavāsi pañcābbhināṭāpaso āgantvā tatth' eva nisīdi. Nandamūlakapab-bhārato paccakabuddho pi āgantvā tatth' eva nisīdi. Kuṭumbiko rañño hatthadbovanāṃ datvā nānaggarasehi sūpavyañjanehi bhattapātāṃ sajjetvā rañño upanesi.

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. (a) Decline any *three* of the following :— 3  
 वारि in locative singular, तिर्यक् in genitive plural, वृ in ablative singular, युष्मि (nenter) in accusative plural and अहन् in instrumental plural.
- (b) Explain and illustrate any *two* of the following :— 3  
 निर्धारणे षष्ठी, भावे सप्तमी, and उपलक्षणे द्वितीया.
- (c) Correct any *four* of the following sentences :— 6  
 (i) गुरु धर्मः पृच्छति ।  
 (ii) विडालो मत्स्यस्य रोचते ।  
 (iii) सो भवन्तं पूजयति ।  
 (iv) दिक्षतयः पुरुषा आगताः ।  
 (v) अयः प्रजा राजानं प्रणमन्ति ।  
 (vi) कथं त्वमवावतिष्ठसि ?
- (d) Change the voice of any *two* of the following sentences :—  
 (i) स मां पश्यति ।  
 (ii) ते कार्याण्यकुर्वन् ।  
 (iii) इदं त्वया न वक्तव्यम् ।
2. (a) Conjugate *thā* in the optative, *su* in the aorist and *kar* in the imperative. 6
- (b) Give the meanings of any *three* of the following :— 3  
*puttiyati, dicchati, ghāṭeti, ṭhiyati and camkamati.*

- (c) Expound the *samāsa* in any two of the following :— 3  
*rājabhayam, kadanno, and catuḍḍisaṃ.*
- (d) How are infinitives formed in Pāli? Give examples. 3
3. Write a clear note on the origin and classification of the *Prākṛits*. 14
4. Either, What do you understand by phonology? How are 16  
 Sanskrit *i, r, ai, bh,* and *y* represented in Pāli? Give examples.
- Or, Write philological notes on :—*gilāno dhamo, voharati, taṇhā,* 16  
*tatta, and subbaco*
- Explain and illustrate *prothesis* and *dissimilation*.
5. Name the groups of languages included in the Indo-Germanic 10  
 family How do you ascertain whether a particular idiom is Indo-Ger-  
 manic or not?
6. Translate into Pāli :— 30

Now at that time the Brahmana was thinking of harbouring the following wicked views :—Suppose that a Saurana or a Brahmana have reached up to some good state of mind, then he should tell no one else about it. For what can one man do for another? To tell others would be like the man, who having broken through an old bond, should entangle himself in a new one. Like that, I say, is this desire : it is a form of lust.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Either, Explain clearly the following verses :— 16
- (a) Lokanāthe dasabale sattāhapaṇinibbute  
 dubbhāsitaṃ Subhaddassa vuḍḍhassa vacanaṃ saraṃ,  
 saraṃ cīvaradānaṃ ca samatte tthapanam tathā  
 saddhammaṭṭhapanatthāya muninānuggaḥaṃ katam.  
*and*
- (b) Iti paramamaññaṃ pattipattabbakānaṃ  
 tibhavahitakarānaṃ lokanāthorasānaṃ  
 sumariya maraṇaṃ tam sampkhatāsarakattaṃ  
 parigaṇiyam asesam appamatto bhaveyyā ti.
- Or, Translate into English the following verses :—
- (a) Tadā so Revatattthero saddhammaṭṭhitiyā ciraṃ  
 kāretum dhammasaṃgātiṃ sabbabhikkhusamūhato  
 pabbhinnaṭṭhādānānaṃ piṭattayaḍḍharinaṃ  
 sattāni satta bhikkhūnaṃ arahantānaṃ uccini.  
*and*
- (b) Mahādayassāpi jinassa kaḍḍhanam  
 vibhaya pattam amataṃ sukham pi te  
 karimsu lokassa hitam tabhiṃ tabhiṃ :  
 bhaveyya ko lokabite pamāḍavā? ti.

2. *Either*, Does the *Mahāvamsa* furnish you with any clue for ascertaining the year of Buddha's death? Is that date accepted by the present day historians? If not, what are their grounds for not accepting it? 8

Or, State the grounds on which some of the European critics do not admit the authenticity of the First and the Third Councils.

3. Relate the story of Aśoka's conversion to Buddhism. Is there any historical truth in it? 8

4. What do you know about the activities of *four* of the following *theras* :—Moggaliputtatissa, Sōpaka, Majjhantika, Yasa, Dhammarakkhita, and Sōpa. 8

5. Name the influencing letters in a word which change न into ण and स into ष according to the Sanskrit grammar. 6

6. Conjugate स or दा in लोट् (imperative) and कृ or भिद् in लिट् (perfect tense). 6

7. Decline any *two* of the following bases in all cases and numbers :— 6  
मति, नदी, धीमत्, अहन्.

8. Translate into Sanskrit any *three* of the following sentences :— 6

- The king lost his life in battle.
- Let these boys take this fruit.
- O blind man, what is the use of this lamp to you?
- My servants will come back within fifteen days.
- This is the tallest tree in the garden.

9. Frame *three* sentences using any *three* of the following adverbial adjuncts :— 6

सहसा, कदा, पुनः, पूर्व, कल्याणाय.

10. Translate into English any *two* of the following extracts :— 30

- Catukkhattum pañcakkhattum viharā upanikkhamim  
uladdhā cetaso santum citte avasavattinī.  
tassā me utthamī ratti taṇhā mayham samūhatā  
bahūhi dukkhadhammehi appamādaratāya me  
taṇhakkhayo anupatto katam buddhassa sāsanaṃ.
- Pūretvā pāramī sabbā patvā sambodhiṃ uttamaṃ  
uttamo Gotamo buddho satte dukkhā pamocayi.  
Magadhesu Uruvelāyaṃ bodhimūle mahāmuni  
Vesākhapunnamāyaṃ so patto sambodhiṃ uttamaṃ  
sattāhāni taṃ satta so vimuttisukhaṃ paraṃ  
vindam taṃ madhurattaṃ ca dassayanto vasi vasi.
- Vijayo so mahārājā vasse antimake thito  
iti cintayi : “ vuddho 'haṃ na ca vijjati me suto,  
kicchena vāsitaṃ rattham nasseyyātha mamaccaye,  
ānapeyyaṃ rajjahotu Sumittaṃ bhātaraṃ mama.”  
Athamaccehi mantetvā lekhaṃ tattha visajjayi,  
lekhaṃ datvāna Vijayo na cirena divaṃ gato.

## FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## A. TEXT

1. Translate any *three* of the following extracts, adding short explanatory notes where necessary :— 12

(a) Vande te pitarāṇi bhaddē Timbarāṇi Suriyavaccase |  
yena jātā 'si kalyāṇi ānandajanani mama ||  
Vāto 'va sedanaṃ kanto, pāṇiyaṃ va pipāsito |  
Aṅgīrasi piyā me 'si dhammā arahantāṃ iva ||

(b) Iti 'pi so Bhagavā arahāṇa saṃmā-sambuddho sugato lokavido  
anuttaro purisadamma-sārathi satthā devamanussānaṃ Buddho Bhagavā'ti.  
Svākkhāto Bhagavato dhammo sandiṭṭhiko akāliko elipassiko opānāyiko  
paccattaṃ veditabbo viññūhi ti.

(c) Suṇantu bhonto mama ekavākyam |  
ambākaṃ Buddho ahu khantivādo ||  
Va hi sādhaṃ uttama-puggalassa |  
sarirabhaṅge siyā saṃpahāro ||

(d) Yo kho Ānanda bhikkhu vā bhikkhuṇi vā upāsako vā upāsikā vā  
dhammānuddhammapaṭipanno viharati sāmīcipaṭipanno anuddhammacārī so  
Tathāgataṃ sakkaroti garukaroti mānēti pūjēti paramāya pūjāya.

2. Either, Elucidate the historical background of the grim determination and dramatic utterance of King Ajātasattu of Magadha in the extract quoted below :— 8

"Ahaṃ ime Vajji evaṃ mahiddhike evaṃ mahānubhāve ucchejjāmi,  
Vajji vināśessāmi, Vajji anyavyasanaṃ apādessāmi Vajji ti."

Or, Characterize either the Mahāparinibbāna or the Sakkapañha-suttanta as a type of literary composition with citations of relevant passages or words.

3. Write short explanatory and critical notes on any *five* of the following :—*porāṇā Vajji-dhammā, āsabhivācā bhāsītā, cattāro mahā-padesā, sūlara-maddava, dhammanvaya, brahma-daṇḍa, khuddānukhuḍḍa-sikkhāpadāni*, and *Sakka-pañhāni*. 10

4. Either, Evaluate the importance of the Mahāparinibbāna-Suttanta as a historical document. 10

Or, Determine the relation between the prose and the verse in your texts, stating which of the two is, in your own opinion, the older, and why.

## B. SANSKRIT GRAMMAR

*Answer any FIVE of the following questions*

5. Name the five classes of *samāsas* and give two illustrations of each class. 6

6. State the rules for the formation of comparative and superlative adjectives in Sanskrit. 6

7. State the rules for the formation of passive and causative verbs in Sanskrit. 6

8. Give the derivation of any *six* of the following words :— 6  
 नेतव्यः ; बुद्धः ; आदाय ; अर्पणम् ; उच्यते , जातिः ; न्यायः ;  
 and कर्मन्.  
 9. (a) Conjugate युज् in *lañ* or हन् in *liṭ*. 3  
 (b) Decline in all cases and numbers हृदम् in masculine or सर्व in feminine. 3  
 10. Account for the case-endings in any *six* of the following words :— 6

फलेभ्यो याति ।

तस्मै निवेदयति ।

तेन किं प्रयोजनम् ।

अलमति विस्तरेण ।

अग्नये स्वाहा ।

चैत्रात् पूर्वः फाल्गुनः ।

आ कैलासात् ।

ग्रामेषु अधिपतिः ।

### C. UNSEEN PASSAGES

11. Translate into English any *two* of the following passages :— 30

(a) Ekaṃ samayaṃ āyasmā Kumārakassapo Kosalesu cārikam cāramāno mahatā bhikkhusaṃgheṇa saddhiṃ pañcamatthehi bhikkhusatehi yena Setavyā nūma Kosalanam nagaram tad avasuri. Tatra sudam āyasmā Kumārakassapo Setavyāya viharati uttarena Setavyā Sipsa-pāvaṇe. Tena kho pana samayena Pāyāsi rājāñño Setavyāya ajjhāvasati sattussodam satipakatthodakam sadhaññaṃ rajabhoggaṃ rañña Pasenadi Kosalena dinnaṃ rājuddāyaṃ brahmadoyyaṃ.

(b) Mā kho tvaṃ tāta dibbe cakkaratane antarabhe annattamaṇo abosi anattamanataṇ ca paṭisaṃvedesi. Na hi tāta dibbam cakkaratanaṃ pettikeṃ dāyaṃ. Iñha tvaṃ tāta ariye cakkavattivatte vattāhi. Thānaṃ kho paṇ'etaṃ vijjati yaṃ te ariye cakkavattivatte vattamānassa tadabu uposathe paṇṇase sisam nabhātassa uposathikassa uparipāsāda-varagatassa dibbam cakkaratanaṃ pātubhavissati.

(c) Rañño paccañtimuṃ nagaram dābhuddāpaṃ dāhapākāratoranaṃ ekadvāraṃ, tatr' asti dvāriko paṇḍito viyatto medhāvi aññātānaṃ nivāretā, ātānaṃ paṇeṭā. So tassa nagarassa samantā anupariyāya pathaṃ anukkamaṇe na passati pākārasandhiṃ vā pakāravivaraṃ vā antamaso bilāḷa-nissakkana-mattarā pi. Tassa evaṃ hoti :—“Ye kho keci oḷārikā pāpā imaṃ nagaraṃ pavisaṃti vā nikkhamanti vā, sabbe te imiṇā va dvārena pavisaṃti vā nikkhamanti vā ti.”



## SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*All questions are of equal value*

## GROUP A

*Attempt FOUR questions only*

1. Describe the political condition of India about the time of Buddha.
2. What light do the Pāli books throw on the trade routes of ancient India?
3. Describe the antiquity and origin of writing in India.
4. Describe the 'outward form and style of Pāli literature.'
5. What were the popular and religious beliefs in India in the sixth and seventh centuries, B.C.?
6. Describe the origin and rise of Mahāyānism.
7. Give a succinct account of the Prātimoksha.

## GROUP B

*Attempt FOUR questions only*

8. Describe the business of the science of language, pointing out also 'the peculiar charm of the study of languages.'
9. Discuss 'whether there are any great general principles which underlie the special sound-changes or "sound-laws" of a given language.'
10. Write a brief but clear note on 'The Morphological Classification of Languages.'
11. Describe the affinities between the Aryan and the Ugrian groups of languages.
12. State what you exactly understand by the individuality of languages.
13. 'Old Sanskrit and Avesta are sister languages which separated from each other in at least the second millenium before Christ.' Discuss.
14. Give an account of Inscriptional Prākṛits, specifying their dialects and their phonological and morphological peculiarities.

## PĀLI—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any four of the following stanzas, adding 16  
short explanatory notes where necessary :—

- (a) Bahum pi ce salitam bhāsamāno |  
na takkarō hoti naro pamatto ||  
Gopo va gāvo gaṇayam parevaṃ |  
na bhāgaṃ sāmāññassa hoti ||

- (b) Ekaṃ dhammaṃ atītaṃ musāvādiṃsa jantuno |  
vitiṇṇaparalokassa n' atthi pāpaṃ akāriyaṃ ||
- (c) Na tena bhikkhu bhavati yāvata bhikkhate pare |  
vissaṃ dhammaṃ samādāya bhikkhu hoti na tāvata ||
- (d) Kassako paṭijānāsi na ca passāma te kasiṇ |  
kasiṇ no pucchito brūhi yathā jānemu te kasiṇ ||
- (e) Sikhī yathā nīlagīvo vihaṅgamo haṃsassa nōpeti kuḍācanaṃ |  
evaṃ gīhī nānukaroti bhikkhuno munino vivittassa vanamhi jhāyato ||
- (f) Brahmabhūto atitulo Mārasenapamaddano |  
sabbāmitte vasi katvā modāni akutobhaye ||

2. Explain any four of the following with reference to the context, 12  
indicating how far each of them strikes the keynote of Buddhism—  
(a) *manopubbasaṅgama dhammā*; (b) *appamādo amatapadaṃ*; (c) *attā hi attano nātho*; (d) *eko care khaggavisāṇa-kappo*; (e) *ekaṃ hi saccaṃ na duttiyaṃ ahi*; (f) *taṇhāya mūlaṃ khaṇatha*.

3. Explain any two of the following stanzas in Pāli :— 12

- (a) Alaṅkato ce pi samaṃ cāreyya |  
santo danto niyato brahmacārī ||  
sabbesu bhūtesu nidhāya daṇḍaṃ |  
so brāhmaṇo, so samaṇo, so bhikkhu ||
- (b) Vāṇijo va bhayaṃ maggaṃ appasatto mahaddhano |  
visaṃ jīvitaḥkamo va pāpāni parivajjaye ||
- (c) Yo uppatitaṃ vineti kodhaṃ visaṃ sappavisuṃ' va osadhehi |  
so bhikkhu jahāti orapāraṃ urago jippaṃ iva tacaṃ purāṇaṃ ||

1. Write short explanatory and critical notes on any four of the follow- 10  
ing :—*Mārasa papupphakāni*, *Māraṃ savāhanaṃ*, *ārāma-rukkhacetyāni*,  
*nakkhattapatha*, *Athabbaṇa*, *purisājaṇṇa*, and *Dhanapālako nāma kuṇjaro*.

5 Give the substance of EITHER the *Appamādaavagga* in the *Dhamma-* 10  
*pada*, or the *Uraga-sutta* in the *Suttanipāta*.

6. Either, Cite instances of archaism from the *gāthās* and *suttas* in 10  
your texts. How would you account for their occurrence in Pāli?

Or, Can you trace any sequence of thoughts in the first three or in  
the last two chapters of the *Dhammapada*? If so, state how you can do so.

7. Translate the following stanzas into English :— 30

Isayo pubbakā āsuṃ saṇṇatattā tapassino |  
pañcākāmaguṇe hitvā attadattham acarisuṃ ||  
Na pasu brāhmaṇānāsuṃ na hiraṇṇaṃ na dhāniyaṃ |  
sajjhāya-dhana-dhaṇṇāsuṃ brahmaṇidhim āpālayuṃ ||  
Yaṃ nesaṃ bhatakaṃ āsiṃ dvārabbettam upaṭṭhitaṃ |  
saddhāpakatam esānaṃ dātave tad amaṇṇisuṃ ||  
Nānārattehi vatthehi sayanehāvasatthehi ca |  
phitā janapadā raṭṭhā te namassimsu brāhmaṇe ||  
Avajjhā brāhmaṇā āsuṃ ajeyyā dhammarakkhiṃ |  
na te koci nivāresi kulādāresu sabbaso ||  
Aṭṭhacattāriṃsaṃ vassāṃ (koṃāra-) brahmacariyaṃ carimsu te |  
vijjā-carāṇa-pariyeṭṭhi acarūṃ brāhmaṇā pure ||

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any *two* of the following extracts, adding short explanatory notes where necessary :— 20

(a) Ath' ekadivasam Milindo rājā anantabalavāhanam caturāṅginim balaggasenābyūhaṃ dassanakamyatāya nagarā nikkhamitvā bahinagare senāgaṇanam kāretvā so rājā bhassappavādako lokāyata-vitaṇḍa-janasallāpappavattakotūhalo suriyam oloketvā amacce āmantesi : " Bahu tava divasāvaseso, kiṃ karissāma idān' eva nagaram pavisitvā ; atthi koci paṇḍito samaṇo vā brāhmaṇo vā saṅghī gaṇī gaṇācariyo, api arahantaṃ sammā-sambuddhaṃ paṭijānamāno, yo mayā saddhiṃ sallapitum sakkoti kaṅkham paṭivinetum " ti.

(b) Saha paṭisandhigahaṇā tayo acchariyā abbhutā dhammā pāturaheṣum : āvudhābhāṇāni paṭṭajalimsu, aḥsasassaṃ abhinipphannaṃ, mahāmegho abhippavassi. Āyasmā pi kho Rohaṇo tassa paṭisandhigahaṇato paṭṭhāya dasamāsālikāni sattavassāni taṃ kulam piṇḍāya pavisanto ekadivasam pi kaṭacchunattam bhattam vā ulunkamattam yāgum vā abhiyādanam vā añjalikammaṃ vā sāmīcikkammaṃ vā nālattha, atha kho akkosaṃ nēva paribhāsaṃ nēva paṭilabhati, aticchatha bhante ti vacanamattam pi vattā nāma nāhosī.

(c) Yathā mahārāja muddā-ṣaṇaṇā-sankhā-lekhāsippaṭṭhāresu ādikammikassa dandhāyaṇā bhavati, athāparena nisamamikiriyāya samudācaritattā adandhāyaṇā bhavati, evam eva kho mahārāja samudācaritattā yattha cakkhuvīññāṇam uppajjati tattha manovīññāṇam pi uppajjati, na ca cakkhuvīññāṇam mano-vīññāṇam āṇāpeti : yatthā ham uppajjāmi tvaṃ pi tattha uppajjāhi ti, nāpi manovīññāṇam cakkhuvīññāṇam āṇāpeti : " yattha tvaṃ uppajjissasi aham pi tattha uppajjissāmi ti, anālāpo tesu aṇṇamaññehi, samudācaritattā uppajjanti " ti.

(d) Vāhasataṃ kho mahārāja vihinam aḍḍhacūlaṃ ca vāhā vihi satti' ammaṇāni dve ca tumbā ekaccharakkhane pavattacittassa ettakā vihi lakkhaṃ ṭhapiyamāne parikkhayaṃ pariyaḍānam gaccheyyumu. Tatr' ime sattavidhā cittā pavattanti : ye te mahārāja sarāgā sadosā samchā sikkilesā abhāvitakāyā abhāvitasilā abhāvitacittā abhāvitapaṇṇā tesu taṃ cittam garukam uppajjati dandham pavattati, kiṅkaraṇam : abhāvitattā cittassa.

(e) Rājā āha : " Kiṃ te saccabalam atthi coriyā dhuttiyā asatiyā chiṇṇikāva pāpiyā bhinnasimāya atikkantikāya andhajanavilopikāyā " ti. " Saccam Mahārāja tādisikā aham, tādisikāya pi me mahārāja saccakiriyā atthi yāyāham icchamānā sadevakam pi lokam parivatteyyan " ti. Rājā āha : " Katamā pana sā hoti saccakiriyā, iṅgha mā sāvehi " ti. " Yo me mahārāja dhanam deti khattiyo vā brāhmaṇo vā vesso vā suddo vā aṇṇo vā koci tesam samakam yeva upaṭṭhahāmi, khattiyo ti viseso n' atthi, suddo ti atimaññaṇā n' atthi, anunaya-paṭigha-vippamuttā dhanasāmikam paricarāmi esā me deva saccakiriyā yāyāham imam Mahāgaṇam paṭisotaṃ sandāpesin " ti.

2. (a) Parse any *two* of the following :—*tāva* in (a), *samudācaritattā* in (c), and *paṭisotaṃ* in (e) in Question 1. 1

(b) Account for the case-endings in *piṇḍāya* in 1 (b), and *samayena* in 1 (c). 1

(c) Derive any *two* of the following :—*alattha* in 1 (b), *dandhāyaṇā* in 1 (c), and *ṭhapiyamāne* in 1 (d). 1

(d) Expound the *samāsa* in *ekaccharakkhaṇe* in 1 (d). 1

(e) Conjugate the root of *atīcchatha* in 1 (b) in the past preterite singular. 1

3. (a) Explain, with illustrations, any five of the following :—*ūhana*, *upatthambhana*, *apilāpana*, *vedagū*, *abhisaṅkharāṇa* and *appanā*. 10

(b) Write historical or geographical notes on any three of the following :—*Asokārāma*, *Yonakā*, *Cinavisaya*, *Devadatta*, and *Anantakāya*. 6

4. State in your own English, Nāgasena's reply to any two of the following questions :— 9

(a) *Kena kāraṇena manussā na sabbe samakā?*

(b) *Kimāhkhāṇo samādhī?*

(c) *Ko paṭisandahati?*

(d) *Atitassa addhānassa kim mūlaṃ?*

5. Relate the story in the *Dhammapada Commentary* which is alluded to in one of the following stanzas :— 10

(a) *Uṭṭhānen' appamādena saññāmena damena ca |  
dīpaṃ kayirātha medhāvī yam ogho nābhikīrati ||*

(b) *Pamādam anuyuñjanti bālā dummedhino janā |  
appamādaṃ ca medhāvī dhanam seṭṭham va rakkhati ||*

6. Either, Write, with illustrations where possible, a note on the controversial character of the *Milinda-panha*. 10

Or, What shade or shades of Buddhism do you find emphasized in the *Milinda panha*? Give your answer with illustrations from the text.

7. Translate into idiomatic English :— 30

So lu puññasampanno satto purimattabbhāve Bārāṇasīyaṃ vasanto vappakāle khettaṃ gacchanto ekaṃ paccekabuddhaṃ disvā dāsakammakare "vapaṭhā" ti paṇṇitvā sayāṃ nivattitvā paccekabuddhaṃ gehaṃ netvā bhojetvā puna Gaṅgālīraṃ netvā puttana saddhiṃ ekato hutvā udumbara-bhittipādaṃ naḷabhittikaṃ paṇṇasālāṃ katvā dvāraṃ yojetvā caṇḍikamaṃ katvā paccekabuddhaṃ tattha temasāṃ vasāpetvā vutthavassaṃ dve pi pitāputtā ticivarena acchādetvā uyyojayisū. Eten' eva niyāmena sattha paccekabuddhe tāya paṇṇasālāya vasāpetvā ticivarāṇi adāsu. Dve pi pitāputtā naḷakārā hutvā Gaṅgātīre veḷum upadhārentā paccekabuddhaṃ disvā evaṃ akāṃsū ti pi vadanti yeva. Te kālāṃ katvā Tāvatiṃsabbhavane nibbatitvā chasu kāmasaggesu anulomapaṭilomena mahantaṃ devissariyaṃ anubhavantā vicaranti.

### THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

### GROUP A

*Attempt any FOUR questions*

1. Explain fully Grimm's Law with proper examples. 10
2. Define *Regressive Assimilations*, *Metathesis* and *Haplology* and give examples. 10
3. Show how far the vowel system in Avesta agrees with or differs from that in Sanskrit. 10

4. What do you understand by 'Inscriptional Prakṛita'? Show the points of agreement between the language of the Inscriptions of Aśoka and Pāli. 10
5. State in brief the different theories regarding the origin of Pāli. Which of these do you accept and why? 10
6. Mention and exemplify some characteristics of the Aryan and the Germanic groups of languages. 10

## GROUP B

1. (a) Join by *saṃdhi* any three :— 3

सखे इह ; दिक् नागः ; पतन् तरुः ; हताः गजाः ; भ्रातः देहि ।

- (b) Decline *three* of the following bases :—गिर् dative and locative singular; गरीयस् nomiuative singular and accusative plural; अस्थि nominative plural and ablative singular; कट् instrumental singular and accusative plural. 3

- (c) Conjugate *three* of the following roots :—तन् or की present indicative, first person plural (*Parasmaipada*); दा or गै perfect, first person singular; दृश् or पा aorist, third person singular; हिष् or हु imperfect, third person singular (*Parasmaipada*). 3

- (d) Construct short sentences in Sanskrit to illustrate the use of any *three* of the following :— 3

पुनः, अपि, गन्तुम्, कृत्वा, and गतः ।

- (e) Give the feminine forms of any *three* :— 3

अज, तरुण, मृदु, इन्द्र, मत्स्य and युवन् ।

2. (a) Account for the case-endings in *five* of the words in italics :— Adhi *devesu* Buddhō; *svāgataṃ te* mahārāja; tena *kho samayena*; *Gaṅgāyaṃ* ghoso; *gāmassa* pādena gato; *suvaṇṇaṃ taṃ* maññe; *yojanaṃ* kalahaṃ karonto gacchanti. 5

- (b) Name and expound the *samāsa* in any *four* :—Adhicittaṃ; rathapattikaṃ; pañcendriyaṃ; saṃsāradukkhaṃ; apāyagato; pabhaṅkara. 4

- (c) Give the aorist forms of the following roots :—*su* (to hear) or *kar*, first person singular; *han*i or *gan*hi, third person plural; *pa-mad* or *nac*, third person singular. 3

- (d) Substitute one word for *three* of the following :—Vinayaṃ adhīte; Cāpo assa āvudhō; Dhammassa santikaṃ; Vidiśāya avidure bhavo; Doṇassa apaccaṃ putto. 3

3. Translate the following extract into Pāli :— 30

Now at that time a poor Brahman in Benares had got deeply into debt, and being pressed by his creditors he said to himself, 'Why should I go on living here? I am sure it will be better to go into the forest and die.' So having gone from his home he went by successive journeys till he came to that hermitage. He entered it and pleased the ascetic by his diligent discharge of his duties. The ascetic said to himself, 'This Brahman is very helpful to me, I will give him the divine spell which the king of Garuḷas gave to me.' So he said to him, 'O Brahman, I know the Alambāyana spell, I will give it to you, do you take it?'

## GROUP C

*Alternative to Questions 1, GROUP B. For Burman Candidates only.*

(a) Explain with suitable examples the distinction between *tulyādhikarāṇa-* and *bhinnādhikarāṇa-Bahubhi-*.

(b) Give at least six examples to illustrate the different connexions with which the ablative case may be used in Pāli.

(c) Show by means of examples the different uses of the Infinitive in Pāli.

(d) Derive and give the derivative meanings of any three of the following words :—*mīmāṃsati*, *saddhāpeti*, *mamāyati*, *dānadāyī* and *mahodadhī*.

## ARABIC HONOURS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Answer any three of the following :—

18

(a) What are the Arabic terms used to classify the Arab poets according to their period? What difficulty is there in the way of deciding the period of composition of an anonymous Arabic poem?

(b) Describe the chief sources of our information about the early literature and conditions of the Arabs.

(c) With what subjects did Arabic poetry deal down to the end of the 'Abbāsid period? Is there any of this poetry that can be classed as Epic, Ballad, or Lyric?

(d) Wherein does the value of the *Hamāsah* of Abū Tammām lie? What feature or piece of information has most impressed itself on your mind in the course of your reading the selections from it?

2. Explain fully the following passages, giving the context if necessary:— 15

(a)

و يرزق الانسان من حيث لا \* يرجو ر احيانا يضلُّ الرجا  
اليباس يحكى للفتى عرضه \* والطمع الكاذب داء عيا  
ما ازين العلم لاصحابه \* وغاية العلم تمام التقى  
و الحمد من اربح كسب الفتى \* و الشكر للمعروف نعم الجزل  
يا آمن الدهر على اهلك \* لكل عيش مدة ر انتها

(b)

الم تعى ويحك مما تقوم \* فى طلب الرزق ارتفع  
فما يحرم الفخر اصحابه \* ر لا يرزق المال من يجهد  
توكل على الله ر اقنع ر لا \* ترد فضل من فضله انك  
فقد حلف البخل الا يرى \* بها من يتم له موعده  
وان جمدت عنك ايدى العباد \* فان يد الله لا تجمد

(c)

و بمن اذل الدهر مصرعه \* فتبرأت منه عشائره  
مستودعا قبرا قد اثقله \* فيها من الحصباء قابره  
دوست محاسن وجهه ونفى \* عنه النعيم فتلك سائرة  
فقريبه الادنى مجانبه \* و صديقه من بعد هاجره  
يا مونر الدنيا ر طالبها \* ر المستعد لمن يفارها

3. (a) Write notes on the expressions underlined in Question 2. 18

(b) Parse according to the Arabic grammar:—

و الشكر للمعروف نعم الجزا فقريبه الادنى مجانبه  
يا آمن الدهر على اهلك

(c) Has Abu'l 'Atāhiyah contributed anything positive to philosophical or religious thought? What attitude to the ills of life does he recommend?

4. (a) Translate the following lines:— 15

وانت امرء اما ايتملك خاليا \* فحنت ر اما قلت قولا بلا علم  
فانت من الامرائى كان بيننا \* بمنزلة بين الخيانة ر الانلم

(b) What is the narrative attached by Abū Tammām to the above couplet? What do you know of زياد بن ابيه? Are all such explanatory narratives preceding these poems to be accepted as reliable?

5. Translate the following passages :—

13

(a)

ای عیش عیشی اذا كنت منه  
بین حل و بین رشك رحیل  
كل فم من البلاد كانی  
طالب بعض اهله بذحول  
ما ارى الفضل و التكرم الا  
كفك النفس عن طلاب الفضول  
و بلاء حمل الایادی و ان تسمع  
منا توتی به من منیل

(b)

بینا نسوس الناس و الامر امرنا  
اذا نحن فیهم سوقة نتنصف  
فأنت لدنیا لا یدرم نعیها  
تقلب تارات بنا و

(c) Are there any figures of speech in the two passages in this Question?

(d) Mention some Arab poetesses and state the nature of the poetry in which women expressed themselves most effectively.

6. Explain in Arabic the following lines :—

16

(a)

یستوجب النصر من صحت عزائمہ  
و یقتنی الشکر من عمت مکارمہ  
بالمال و النفس نال المجد طالبہ  
أن العظیم لمن هانت عظامہ  
فی کل دور لهذا الدین منتظر  
یشده بعد ما تخفی معالمہ  
فالیوم کل امامی یوافقنا  
بان شاه ارمن المهدی قائمہ  
من یملأ الارض عدلا بعد ما ملئت  
جورا و تکشف غماها صوارمہ



(b) *Either*, Mention the author of these lines, and give an account of the circumstances and period in which he lived.

*Or*, Give the scansion of any *one* line in Question 6 (a).

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. (a) Translate into English :—

15

إِنَّ هَذَا الْقُرْآنَ يَهْدِي لِلَّتِي هِيَ أَقْوَمُ ، وَيُبَشِّرُ  
الْمُؤْمِنِينَ الَّذِينَ يَعْمَلُونَ الصَّالِحَاتِ أَنَّ لَهُمْ أَجْرًا  
كَبِيرًا - وَأَنَّ الَّذِينَ لَا يُؤْمِنُونَ بِالْآخِرَةِ اعْتَدْنَا لَهُمْ  
عَذَابًا أَلِيمًا - وَيَذَرُ الْإِنْسَانَ بِالْشَّرِّ دُعَاءَهُ بِالْخَيْرِ  
وَكَانَ الْإِنْسَانُ عَجُولًا - وَجَعَلْنَا اللَّيْلَ وَالنَّهَارَ  
آيَاتٍ فَمَحْوَرَاتٍ آيَةَ اللَّيْلِ وَجَعَلْنَا آيَةَ النَّهَارِ  
مُبْصِرَةً لِّتَبْتَغُوا فِيهِ فَضْلًا مِّن رَّبِّكُمْ وَلِتَعْلَمُوا عَدَدَ  
السِّنِينَ وَالْحِسَابَ - وَكُلَّ شَيْءٍ فَصَّلْنَاهُ تَفْصِيلًا - وَ  
كُلَّ إِنْسَانٍ أَلْزَمْنَاهُ طَائِرَةً فِي عُنُقِهِ - وَنُخْرِجُ لَهُ يَوْمَ  
الْقِيَامَةِ كِتَابًا يَلْقَاهُ مَنشُورًا - اقْرَأْ كِتَابَكَ كَفَى  
بِنَفْسِكَ الْيَوْمَ عَلَيْكَ حَسِيبًا - مَن اهْتَدَى فَإِنَّمَا  
يَهْتَدِي بِنَفْسِهِ وَمَن ضَلَّ فَإِنَّمَا يَضِلَّ عَلَيْهِمَا وَلَا  
تُزِرُّ وَازِرَةً زُرَّ أُخْرَى وَمَا كُنَّا مُعَذِّبِينَ حَتَّى نَبْعَثَ رَسُولًا \*

(b) Give the uses of <sup>لَّ</sup>إِنَّ and <sup>لَّ</sup>أَنَّ and illustrate them with examples.

8

(c) State the various kinds of **إضافت** and point out the kind of **إضافة** in **آية الليل** in the above extract. 4

(d) Explain **ر كل انسان الزمناه طائره فى عنقه** in the above extract. 6

(e) Give the **تركيب** of **كفى بنفسك اليوم عليك حسيبا** 5

2. (a) Translate into English:— 15

و انشأت على ما اعانيه من قربة جامدة وفطنة  
خامدة وروية ناضبة وهموم ناصبة خمسين مقامة تعترى  
على جد القول و هزله و رقيق اللفظ و جزله و غرر  
البيان و درره و ملمع الادب و نوادره الى ما وشعتها  
به من الآيات و محاسن الكنايات و رصعته فيها من  
الامثال العربية و اللطائف الادبية و الاحاجى النحوية  
و الفتاوى اللغوية و الرسائل المبتكرة و الخطب المعبرة  
و المواعظ المبكية و الاضاحيك الملهية مما املت  
جميعه على لسان ابي زيد السروجي و اسندت روايته  
الى الحارث بن همام البصري - و ما قصدت بالاحماض  
فيه الا تنشيط قارئيه و تكثير سواد طالبيه و لم اودعه  
من الاشعار الاجنبية الا بيتين فذين اسست عليهما بذية  
المقامة الحلوانية و آخرين توامين ضمنتهما خواتم  
المقامة الكرجية \*

(b) Write notes on:— 10

ترشيم - كناية - ترصيع - فذين - توامين

3. Compare the style of **ابن الجوزي** with that of **لسان الدين** and give the special features of their style. 10

4. Write a short essay in simple Arabic on:— 15

**فضل العالم و المتعلم**

5. Give a short sketch of the life and works of al-Qizwini. 10

6. Explain, with reference to the context, any two of:— 7

(١) **خاطري ابو عذره**

(٢) **كيف يكون حالك اذا نشرت غدا اعلام التائبين**

(٣) **ان لها عليك حقا لم يزل**

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts :—

A

35

بالهوى قلبى تعلق \* و جفا جفنى المنام  
و الحشا منى تمزق \* و دموعى فى انسجام  
جمع شملى قد تفرق \* يا ترى حبى اراه  
آه لولا الشوق اجرى \* عبرتى ما قلت آه  
ذبت من جور الليالى \* و كوى قلبى الفراق  
صار جسمى فى انتحال \* و فؤادى فى احتراق  
من يكن حاله كحالى \* قل ان يلقى دواه  
آه لولا الشوق اجرى \* عبرتى ما قلت آه  
ايها القمرى قل لى \* ما سبب هذا النهاج  
هل كراك الشوق مثلى \* صرت مقصوص الجناح  
قال شملك مثل شملى \* و بكائنا من نواه  
آه لولا الشوق اجرى \* عبرتى ما قلت آه

B

35

و قال ايها الطبيب الجاهل و المكثار من غير  
طائل - ما اقل درايتهك و اجل غرايتك - و اخس  
صناعتهك - و اخسر بضاعتك - الم تعلم انك من دراعى  
الفوت - و خليفة ملك الموت - و رسول قابض الارواح -  
و مُفرّق النفوس عن الاشباح - و انك منذر الى الممات -  
و ذئب في جلد الشاة - و ظالم في زبي مسكين - و ذابح  
بغير سكين - و عدو في صورة صديق - و حشيش يتشبه به  
الغريق - قد ضاع عمرك في ملاحظة الفضلات و  
القاذورات - و طال فكيرك في تركيب المدرّات -

لمسهلات - هل انت بمعرفة القارورة تتبختر - ام بقتل  
نفس لغير الحق تتكبر - جهلك مركب وحمقك مجرب -  
تعسب كلام ابن سينا فى القانون بالوحى المنزل - و  
تزعم قول ابن زكريا بمنزلة خبر النبى المرسل \*

C

35

(كنيسة بلارمة) و من اعجب ما ساهدناه بها من  
امور النصراري كنيسة تعرف بكنيسة الانطاكي ابصرناها  
يوم الميلاد و هـ يوم عيد لهم عظيم و قد احتفلوا لها رجالا  
و نساء - فابصرنا من بنيانها مرامى يعجز الوصف عنه ريقع  
القطع بانه اعجب مصانع الدنيا المزخرفة - جدرانها  
الداخلية ذهب كلها و فيها من السواح الرخام الملون ما  
لم يرمثله قط قد رصعت كلها بفصوص الذهب و كملت  
باشجار الفصوص الخضر و نظم اعلاها بالشمسيات المذهبات  
من الزجاج فتخطف الابصار بساطع شعاعها و تحدث  
فى النفوس فتنة - و علمنا ان بانيتها الذي تنسب  
اليه انفق فيها قناطر من الذهب و كان وزيرا لجد  
هذا الملك - و لهذه الكنيسة صومعة قد قامت على اعمدة  
سوار من الرخام مدونة و علت قبة على أخرى سوار  
كلها فتعرف بصومعة السوراري و هي من اعجب ما يبصر  
من الانبيان \*

2. Translate into English :—

30

When the birds heard this account of the difficulties in their way, they realised that the burden of their mission was too heavy for their tiny shoulders, a mere handful of bones as they were. Their souls became restless and many gave up their lives in the very first stage. The rest advanced with patience and courage, and continued their march for years. Several died on the way ; others were drowned in the sea.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any three of the following passages into English :—

15

A

رسقى المشاعر و المحصب من منى  
سحبا رجاء مراقف الانضاء  
ورعى الاله اصيحابى الاولى  
سامرتهم بمجامع الاهواء  
راها على ذاك الزمان و ما حوا  
طيب المكان بغفلة الرقباء  
ايام ارتع في ميادين المنى  
جدلا و ارنل في ذيل جباء  
ما اعجب الايام ترجب للفتى  
منهجا و تمعنه بسلب عطاء

B

ارمىض برق بالابرق لاحا  
ام في ربي نجد ارى مصباحا  
ام تلك ليلى العامرية اسفرت  
ليلا فصيرت المساء صباحا  
يا عاذل المشتاق جهلا بالذي  
يلقي مليا لا بلغت نجاحا  
اتعبت نفسك في نصيحة من يرى  
ان لا يري الاقبال و الافلاحا  
افصر عذمتك و اطرح من انحنى  
احشاء النجل العيون جراحا

G

و لو نظر الندمان ختم انائها  
 لاسكرهم من دونها ذلك الختم  
 و لو نضحوا منها ثرى قبر ميت  
 لعادت اليه الروح و انتعش الجسم  
 و لو طرحوا فى فى حائط كرمها  
 عليلا و قد اشفى لفارقه السقم  
 و لو قربوا من خانها مقعدا مشى  
 و تنطق من ذكرى مذاقتها البكم

D

أبرق بدا من جانب الغور لامع  
 او ارتفعت عن وجه سلمى البراقع  
 انار الغضا ضاءت و سلمى بذى الغضا  
 ام ابتسمت عما حكته المدامع  
 انشر خزامى فاح ام عرف حاجر  
 بام القرى ام عطر عزة ضائع  
 الا ليت شعرى هل سليمة مقيمة  
 بوادى الحمى حيث المتيم رالع  
 و هل لعل الرعد الهتون بلعلع  
 و هل جادها صرب من المزن هامع

15. (a) Can you suggest an alternative reading for حباء in Question 1 (a) ?

(b) Write a note on the symbolism of the mystic writers, and of Ibnu'l-Fāriḍ in particular.

(c) In what sense was Ibnu'l-Fāriḍ a true son of the Arabian desert in his poetry and also in his conception of spiritual reality ?

8. Explain with reference to the context :—

12

A

و تعطر برخص غير شتى كأنه  
 اساريع ظبي او مساريك اسحل

نضوى الظلام بالعشى كأنها  
منارة ممسى راهب متبتل

B

ر جلا السيول عن الطلوع كأنها  
زبر تجد متونها اقلامها  
ار رجع راشمة اسف نؤورها

كففا تعرض فروقهن وشامها

C

سبقت يدأى له بعاجل ضربة  
ر رشاش نافذة كلون العندم  
هلا سألت الخيل يابذة مالك  
ان كنت جاهلة بما لم تعلمى

4. Answer any three of the following :—

15

(a) Give an account of the game of chance *ميسر* and of the generous customs associated with it.

(b) Explain the various meanings attributed to the terms *معلقات* and *قصيدة*.

(c) Give an account of Imru'u'l-Qais, and discuss the opinion that he excels not only because he is the most talented and the most varied in poetical devices, but also because he is the nearest to Nature.

(d) Compare the *Mu'allaqah* of Labid with of 'Antarah' in form and contents.

(e) Scan the first *bait* of all four passages in Question 1, and state the metre.

5. Explain the following with references to their context :—

14

A

فلا يغرنك ما مننت ر ما وعدت  
ان الامانى ر الاحلام تضليل  
كانت مراعيده عرقوب لها مثلا  
ر ما مراعيدها الا الاباطيل

B

يرما يظل به الصرباء مصطفيها  
كان ضاحية بالشمس مملول

و قال للقرم حاديهم و قد جعلت  
 ورق الجنادب يركصن العصى قيلوا

C

حتى وضعت يميني لا انازعه  
 في كف ذي نقمات قليله القيل  
 لذلك اهيب عندي ان اكلمه  
 و قيل انك منسوب و مسبول

6. Write notes on any six of the following :—

9

- (a) لا ابا لكم (b) رقفأ بها صحبى على مطيهم  
 (c) كالخليع المعيل  
 (d) فظل طهاة اللحم من بين منضج  
 صفيش سواء ار قدير معجل  
 (e) مرابيع النجوم  
 (f) و تقطعت اسبابها و زمابها  
 (g) تردد سبعا تواماً كاملا ايامها  
 (h) غاية تاجر (i) نبئت عمراً غير شاكر نعمتى  
 (j) تلون في اثرابها الغول

7. Translate into Arabic :—

20

Following a course between north and east you next come to the province of Khutan, the extent of which is eight days' journey. It is under the dominion of the Grand Khan, and the people are Muhammadans. It contains many cities and fortified places, but the principal city, which also gives its name to the province, is Khutan. It yields abundantly the necessities of life, and also produces cotton, flax, grain, and other articles.

### FIFTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

18

الم تَلِكْ آيَاتُ الْكِتَابِ الْعَكِيمِ، هُدًى وَ رَحْمَةً  
 لِلْمُعْصِينَ، الَّذِينَ يُقِيمُونَ الصَّلَاةَ وَ يُؤْتُونَ الزَّكَاةَ وَ



هُمْ بِالْآخِرَةِ هُمْ يُوقِنُونَ، أَوَلَيْكَ عَلَىٰ هَدَىٰ مِنْ رَبِّهِمْ  
 أَوَلَيْكَ هُمُ الْمُفْلِحُونَ - وَمِنْ النَّاسِ مَنْ يَشْتَرِي لَهْمَ  
 الْحَدِيثِ لِيُضِلَّ عَنْ سَبِيلِ اللَّهِ بِغَيْرِ عِلْمٍ وَ يُتَّخَذَهَا هُزُوًا،  
 أَوَلَيْكَ لَهُمْ عَذَابٌ مُهِينٌ - وَإِذَا تَنَتَّلَىٰ عَلَيْهِ آيَاتُنَا  
 وَلَّىٰ مُسْتَكْبِرًا كَانَ لَمْ يَسْمَعْهَا كَانَ فِي أُذُنَيْهِ رَقْرَقًا فَبَشَّرَهُ  
 بِعَذَابٍ أَلِيمٍ - إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ لَهُمْ  
 جَنَّاتُ النَّعِيمِ، خَالِدِينَ فِيهَا وَعَدَ اللَّهُ حَقًّا وَهُوَ الْعَزِيزُ  
 الْحَكِيمُ \*

2. Give the **شان نزول** of **يشترى** and **ومن الناس من يشتري** 10  
 explain **الكتاب الحكيم** and **يشترى لهم الحديث** in the above  
 extracts according to **الزمخشري**.

3. Write in simple Arabic the story of **ربيعة النصر** and 10  
**شق و سطع**.

4. (a) Explain with reference to the context :—

15

ان الاولیٰ رهي حالة الدري، هي رتبة الانبياء غير  
 المرسلين على ما حققوه والثانية رهي حالة تمثيل  
 الملك رجلا يخاطب، هي رتبة الانبياء المرسلين،  
 و لذلك كانت اكل من الاولیٰ ر هذا معني الحديث  
 الذي نسر فيه النبي صلي لله عليه وسلم الرحي لما ساله  
 العرث بن هشام وقال كيف ياتييك الرحي، فقال احيانا  
 ياتييني مثل صلصلة الجرس وهو اشد علي فيفصم عني  
 و قد رعيت ما قال، و احيانا يتمثل لي الملك رجلا  
 فيكلمني فاعني ما يقول - و انما كانت الاولیٰ اشد لانها

مبدأ الضرر في ذلك الاتصال من القرة ابي الفعل فيعسر  
بعض العسر \*

(b) Explain the use of **وعيت** at one place and **اعي** at 4  
another in the above extract.

5. Give a short sketch of the life of **ابن خلدون** and estimate his 15  
contribution to the science of history.

6. Translate into English with reference to the context :— 8

تقتل ابذائها ر تنفي سراتها  
ر تبني بايديها لها الذل حمير  
تدمر دنياها بطيش حارمها  
ر ما ضيعت من دينها فهو اكبر  
كذلك القرن قبل ذلك بظلمها  
ر اسرافها تاتي الشرر فتخسر

7. Translate into simple Arabic :— 20

The political weakness of Arabia had always been its lack of unity. At the beginning of the seventh century of the Christian era, the prophet Muhammad fused all the fragments of the Arab world into a fiery unity and launched them upon a great career. The theology of Muhammad was simple. It taught the unity and sovereignty of God, the inspiration and authority of the Prophet, the duty of absolute obedience and submission on the part of the faithful, and the prospect of immortality for the devout. Its morality was high. It enjoined temperance, kindness, self-restraint, and fidelity. It was on account of these qualities that Islam spread so rapidly.

## SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

### A

## MUSLIM HISTORY

*Answer any THREE questions*

1. Estimate the character and achievements of 'Ali (كريم الله وجهه) 10
2. State the cause of the downfall of the Umayyads. 10
3. Sketch the rise of Ṣalāḥu'd-dīn. Give an account of his war with 10  
the Crusaders.
4. Give an account of the Saracens in Africa. 10

## B

## HISTORY OF ARABIC LITERATURE

*Answer any FOUR questions*

1. Give a brief account of the *Mu'allaqāt* and their authors. 10
2. Trace the origin and growth of Arabic prose literature. 10
3. Give an account of literature and science in the 'Abbāsid period. 10
4. Trace the development of free thought and rationalism in Islam. 10
5. Give an account of Sūfī literature in Arabic. 10

## C

## RHETORIC AND PROSODY

*Answer any THREE questions*

1. Scan the following and name the metre. - 10  
يا راکباً سَلَمٌ و قُلْ تعظيماً \* للمجتبى خير الرزى تسليماً
2. Write notes on the following :— 10  
(a) ردیف \*  
(b) تأسيس \*  
(c) رزى \*  
(d) اقراء \*  
3. Explain التشبيه ابلاغ من الاستعارة ابلغ من التشبيه. Illustrate your answer with examples. 10  
4. Write notes on :— 10  
(a) اطناب (d) ; تجنيس (c) ; مجاز (b) ; ايجاز (a).

## ARABIC—PASS

Examiners— { KHAN BAHADUR MD. HASSAN.  
MAULVI A. F. M. ABDUL KADIR, M.A.  
KHAN BAHADUR ABDULLAH ABU SAYEED, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English the following passages :— 18

(a)  
المرء آفته هوى الدنيا  
و المرء يطغى كلما استغنى

انى رأيت عواقب الدنيا  
فتركت ما اهدى لما اخشى  
و بلوت اكثر اهلها فاذا  
كل امرىء فى شانه يسعى  
ولقد بلوت فلم اجد سببا  
باء—ز من قذع ولا اعلى

(b)  
اتراك تحصى من رأيت  
الاحياء ثم رايتهم مروتى  
فلنلحقن بعروة الموتى  
و لتنزلن محللة الهلكى  
من اصبحت دنيا غايته  
فمتى ينال الغاية القصوى  
بيد الفناء جميع انفسنا  
ريد البلي فله الذى يبني  
لا تغترر بالعادات فما  
للعادات على امرىء بقيا  
لا تغبطن فتى بمعصية  
لا تغبطن خلا اخا التقوى

(c)  
نسيت مذيتى و خدعت نفسى  
و طال على تعميرى و غرسى  
و كل ثمينة اصبحت اغلى  
بها ستباع من بعدى بركس  
و ما ادري ر ان املت عمرا  
لعلى حين اصبح لست امسى

و ساعة ميتتى لا بد منها  
 تعجل نقلتى و تطيل حبسى  
 و طالب حاجة اعيا و اكدى  
 و مدرك حاجة فى لين لمس  
الا و لقل ما تلقى شجيا  
 يسىغ شجاء الا بالتاسى

2. Write notes on *ten* of the expressions underlined in the passages in Question 1. 15
3. Would you say that Abu'l 'Atābiyah is morose and morbid rather than a philosopher with a pessimistic system? 10
4. Discuss the statement that the *Hamāsah* is a valuable store-house of folk-songs, with the stern, sad, inevitable note of the desert prevailing. 10
5. Translate into English the following passages :— 18

(a)  
 ابلغ ابا مسمع عنى مغلغلة  
 و فى العتاب حتوة بيس اقوام  
 ادخلت قبلى قوما لم يكن لهم  
 فى الحق ان يدخلوا الابواب قدامى  
 لرعد قبر و قبر كنت اكرمهم  
 ميتا و ابعدهم من منزل الذا  
فقد جعلت اذا ما حاجتى نزلت  
 بباب دارك ادلرها باقوام

(b)  
 و ما انا بالساعى بفضل مامها  
 لشرب ماء العرض قبل الركاب  
 و ما انا بالطارى حقيبة رحلها  
 لابعثها خفا و اترك صاحبى  
 اذا كنت ربا للقلوص فلا تدع  
 رنيقلك يمشى خلفها غير راكب  
 انخها فاردفه فان حملتكم  
 فذاك و ان كان العقاب نعاب

(c)  
يَا بَدْرَ الْأَمْثَالِ نَضْرُ \* بِهَا لَذَى اللَّبِّ الْحَكِيمِ  
دَمٌ لِلْخَلِيلِ بَسُودَ \* مَا خَيْرُ رَدٍّ لَا يَدُومُ

6. Answer any three of the following :—

15

(a) Write notes on the words underlined in Question 5.

(b) Who is the author of the passage in Question 5 (b) ? Is he mentioned in any literature besides Arabic ?

(c) What are the Arabic terms used to classify the Arab poets according to the period of their literary activity ?

(d) Analyse the syntax of the sentences in Question 5 (c).

7. (a) Render into simple Arabic the following lines :—

14

رُ دُونَ دُمِيَّاطَ بَحْرٍ حَالٍ بَيْنَهُمْ  
مِنْ الظِّئَا لَيْسَ يَنْجُورُ مِنْهُ عَائِمُهُ  
ذَلُّوا لِمَلِكٍ إِمَامٍ اللَّهُ صَاحِبُهُ  
مُوسَى سَلِيمَانُهُ رُ السَّيْفِ خَاتَمُهُ  
رُ سَلْمُوهُ رُ رَدُّوا أَهْلَهَا رُ مَضَرَا  
رُ الثَّغْرِ مِنْ فَرْحٍ يَفْتَرُ بِاسْمِهِ  
كَأَنَّهُمْ أَبْصَرُوا مَا قَدْ مَضَى زَمَانَا  
كَأَمَا يَرَوْنَ مَزْعَجَ الْأَحْلَامِ نَائِمُهُ

(b) What do you know of ابن النجيبه and his period ?

## SECOND PAPER

Candidates are required to give their answers in their own words  
as far as practicable

The figures in the margin indicate full marks

1. Translate into English any two of the following :—

22

A

(يُسَبِّحُ لِلَّهِ) يَنْزِيهِهُ فَالِلَّامُ زَائِدَةٌ (مَا فِي السَّرَاتِ  
رُ مَا فِي الْأَرْضِ) فِي ذِكْرِ مَا تَغْلِيْبُ لَلَاكْثَرِ (الْمَلِكِ  
الْقُدُّوسِ) الْمَنْزُوعَ عَمَّا لَا يَلْبِقُ بِهِ (الْعَزِيزِ الْحَكِيمِ \* )  
فِي مَلِكِهِ وَمَنْعِهِ - (هُوَ الَّذِي بَعَثَ فِي الْأُمِّيَّاتِ) الْعَرَبِ

و الامي من لا يكتب و لا يقرأ كتابا (رَسُولًا مِنْهُمْ)  
هو مُحَمَّدٌ صَلَّى اللهُ عَلَيْهِ وَسَلَّمَ (يَتْلُو عَلَيْهِمْ آيَاتِهِ)  
القران (وَيُزَكِّيهِمْ) يُطَهِّرُهُمْ مِنَ الشَّرْكِ (وَيُعَلِّمُهُمُ  
الْكِتَابَ) القرآن (وَالْحِكْمَةَ) ما فيه من الاحكام  
(وَاِنْ) مخففة من الثقيلة و اسمها معذوف اي و  
انهم (كَانُوا مِنْ قَبْلُ) قبل مجيئه (لِفِي ضَلَالٍ مُبِينٍ)  
ببين \*

## B

حكي ان كريم الملك كان من ظرفاء الكتاب ، فعبر  
يروما تحت جرسق ببستان فرأى جارية ذات وجه زاهر و  
كمال باهر لا يستطيع احد وصفها ، فلما نظر اليها ذهب  
عقله و طار لبه فعاد الى منزله و ارسل اليها هدية نفيسة  
مع عجوز كانت تخدمه ، و كانت الجارية عزباء و كتبت اليها  
رقعة يعرض اليها بالزيارة في جرسقها ، فلما قرأت الرقعة  
قبلت الهدية ، ثم ارسلت اليه مع العجوز عنبراً و جعلت  
فيه زر ذهب و ربطت ذلك على منديل ، و قالت للعجوز  
هذا جواب رقعته - فلما رأى كريم الملك ذلك لم يفهم  
معناه و يحير في امره و كانت له ابنة صغيرة السن ، فلما  
رأت اباه مستعيراً في ذلك قالت له يا ابت انا علمت  
معناه ، قال و ما هو لله درك ، قالت :-

اهدت لك العنبر في جوفه

زر من التبر خفي اللجام

فالزر و العنبر معناهما

زر هكذا مغتفيا في الظلام

قال فعجب من فطنتها و فصاحتها و استحسّن ذلك منها -

## C

تَعَلَّمُوا الْعِلْمَ فَإِنْ تَعَلَّمَهُ اللَّهُ حَسَنَةً وَدِرَاسَتَهُ تَسْبِيحًا وَ  
الْبَحْثَ عَنْهُ جِهَادًا وَطَلِبَهُ عِبَادَةً وَتَعْلِيمَهُ صِدْقَةً وَبَذْلَهُ  
لِلْهَلَةِ قَرْبَةً لِأَنَّهُ مَعَالِمُ الْحَلَالِ وَالْحَرَامِ وَبَيَانُ سَبِيلِ الْجَنَّةِ  
وَالْمَوْئِسِّ فِي الْوَحْشَةِ وَالْمُعَدِّثِ فِي الْخَلْوَةِ وَالْجَلِيسِ فِي  
الرَّوْحَةِ وَالصَّاحِبِ فِي الْغُرْبَةِ وَالِدَلِيلِ عَلَى السَّرِّاءِ وَالْمَعِينِ  
عَلَى الضَّرِّاءِ وَالزَّيِّنِ عِنْدَ الْخُلَاءِ وَالسَّلَاحَ عَلَى الْأَعْدَاءِ ، وَ  
بِالْعِلْمِ يَبْلُغُ الْعَبْدُ مَنَازِلَ الْأَخْيَارِ فِي الدَّرَجَاتِ الْعُلَى وَ  
مُجَالَسَةَ الْمَلَائِكَةِ فِي الدُّنْيَا وَمُرَافَقَةَ الْإِبْرَارِ فِي الْآخِرَةِ ، وَ  
الْفِكْرَ فِي الْعِلْمِ يَعْدِلُ الصِّيَامُ وَ مَذَاكِرَتُهُ تَعْدِلُ الْقِيَامُ ، وَ  
بِالْعِلْمِ تَوْصِلُ الْأَرْحَامَ وَ تَفْصِلُ الْأَحْكَامَ وَ بِهِ يَعْرِفُ الْحَلَالُ وَالْحَرَامَ  
وَبِالْعِلْمِ يَعْرِفُ اللَّهُ وَ يَرْحُمُ وَ بِالْعِلْمِ يُطَاعُ اللَّهُ وَ يُعْبَدُ - قِيلَ  
الْعِلْمُ دَرْكُ حَقَائِقِ الْأَشْيَاءِ مَسْمُوعًا وَ مَعْقُولًا - وَ قَالَ النَّبِيُّ  
صَلَّمَ عَلَيْهِ خَيْرُ الدُّنْيَا وَ الْآخِرَةِ مَعَ الْعِلْمِ وَ سَرَّ الدُّنْيَا وَ الْآخِرَةِ  
مَعَ الْجَهْلِ \*

2. (a) Explain ذكر ما تغليب للاكثر in Question 1, A. 3  
(b) What are the different kinds of اِنْ ? State their عَمَل 4  
and illustrate it with examples.  
(c) Differentiate between اَعْلَمَ and تَعَلَّمَ عِلْمَ 3  
(d) Give the معين , زُرْ , اِسْتَطِيعَ of باب and the ماده 3  
(e) Give the افعال مدح و ذم and illustrate their uses with 5  
examples.

3. Explain with reference to the context :—

16

(a) يا مدعي النسيان ! ماذا فعلت بعد التذكير؟  
يا معذرا بالغفلة ايس ثمرة التنبيه؟ يا من قطع  
بالرحيل ! ايس الزاد ! يا ذبابة الحرص ! لم اذا تلجأ  
في ورطة الشهد؟ يا نائماً ملا عينيهِ ! حذار، الاجل  
قد انذرا



(b) كأنك بحرب التلّف قد قامت على ساق ر  
انهزمت بجنود الامل ، واذ بملك الموت بارز الروح  
يجنبها بخطا طيف الشدائد من قيان العروق قد شد  
اكتاف الذبيم و حار البصر لشدة الهول - و ملائكة الرحمة  
عن اليمين قد فتحو ابواب الجنة و ملائكة العذاب عن  
اليسار قد فتحو ابواب النار \*

- (c) Give the تركيب of حَذَار in (a). 3
4. Give a short description of حضرموت as it is given in your text. 10
5. Render in simple Arabic :— 15
- فذاكرته بما قيل فيمن ألف بين كلمتين و نظم  
بيتاً او بيتين - و استقلت من هذا المقام الذي فيه يعار  
الفهم و يفرط الروم و يسير غور العقل و تتبين قيمة  
المرء في الفضل و يضطر صاحبه الى ان يكون كعاطب ليل  
ار جالب رجل و خيل ، و قلما سام مكثار او اقل له عثار -  
فلما لم يسعف بالاقالة و لا اعفى من المقالة لبیت دعوته  
تلبية المطيع و بذلت في مطارعتة جهد المستطيع -
6. (a) Narrate the story of al-Ma'mun and the eloquent girl he married. 8
- (b) Write notes on any two of the following :— 8

ابن الجوزي - القزويني - البدعي

### THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any two of the following extracts :— 35
- (a) ر من المنسرب الى على بن ابي طالب كرم الله وجهه  
اصبر قليلاً نبعد العسر تهسير  
و كل امر له وقت و تدبير

و المهيمن في حالقنا نظر  
 و فرق تدبيرنا لله تقدير  
 وله عليه السلام  
 من كان مفتخراً بالمال و النسب  
 فانما فخرنا بالعم و الادب  
 ليس الجمال باثواب تزيينها  
 ان الجمال جمال العلم و الحسب

(b) حكى انه لما افضت الخلافة الى بني العباس 35

اختلفت منهم جميع رجال بني امية و كان منهم ابراهيم  
 بن عبد الملك - و كان ابراهيم هذا رجلاً عالماً كاملاً اديباً  
 و هرو مع ذلك في سن الشبيبة فاخذوا له اماناً من  
 السفاح فاعطاه ابو العباس السفاح اماناً و اكرمه و قال له  
 لزم مجلسي - فذات يوم قال له ابو العباس السفاح يا ابراهيم  
 حدثني عما مرّ بك في استخفافك من العذر - فقال  
 سمعاً و طاعة يا امير المؤمنين - كنت مختفياً في الحيرة  
 بمنزل في شارع على الصحراء فبينما كنت يوماً على ظهر  
 ذلك البيت اذا بصرت بعلام سود قد خرجت من الكوفة  
 تريد الحيرة فتخيلت انها تريدني - فخرجت مسرعاً من  
 الدار متذكراً حتى اتيت الكوفة و انا لا اعرف احداً اختفي  
 عنده فبقيت في حيرة \*

(c) الانسان - خليفة الرحمن - و النفس كالسلطان - 35

و الاعضاء كالبلدان - و الحواس كالاعوان - و القوى  
 الالهة - كالعمال و الخزائن - و الجوارح كالاركان - كالخدام  
 و الخلمان - و بقاء سلطنة هذا الملك بصلاح رعيته و  
 استقرار ملكه بانتظام امور مملكته - و بالصحة ينتظم  
 امر عالم الاجسام - و بالمرض يختل هذا النسق و النظام -  
 و العلم المتكفل لحصول هذا الغرض - علم الطب الباء

عن احوال بدن الانسان من حيث الصحة و المرض -  
 لحفظ الصحة العاصلة - و استرداد الزائلة - و كفى له  
 شرفا حديث العم علما علم الابدان و علم الاديان \*

2. Translate into Arabic :—

30

One day Sultān Mahmūd offered his crown to his favourite slave, Ayāz. All the courtiers were consumed with jealousy. Poor Ayāz began to weep. When he was asked the reason for such grief in the midst of such good fortune, he said, 'I have nothing to do with anything but the king. I want him alone, whereas by giving me the crown, he wants to keep me engaged in the affairs of the state and withdraws himself from me. This makes my heart bleed with the thought of separation.'

#### PERSIAN—HONOURS

*Paper-Setters—* { KHAN BAHADUR SHAMS-UL-ULAMA HIDAYET  
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 AGA MD. KAZIM SHIRAZI.  
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 MAULVI A. F. M. ABDUL KADIR M.A.  
 SIR ABDULLA SUHRAWARDY, KT. M.A. D.LIT., PH.D.

#### FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far practicable*

*The figures in the margin indicate full marks*

1. Translate into English, adding explanatory notes where necessary :— 12

دوشینه چون کشید شه زنگ لشکرا  
 سلطان روم را ز سر افتاد انسرا  
 باز سفید روز بپرید از آشیان  
 زاغ شب سیاه بگسترد شهپرا  
 تاریک شد سپهر چو ظلمات و اندر  
 تازان ستاره چون بسیاهی سکندرا  
 چو نان شب دراز که پنداشتی قضا  
 یکره بریده نافش تا روز محشر

2. Explain the following :—

24

- (a) اگرچه عرض هنر پیش یار بی ادبیت  
 زبان خموش و لیکن دهان پر از عربیت  
 پری نهفته رخ و دیو در کرشمه و ناز  
 بسرخت عقل ز حیرت که این چه بوالعجبیت  
 درین چمن گل بی خار کس نه چید آری  
 چراغ مصطفوی با شرار بو لهبیت  
 بمعنی هست باینده بصورت هست زاینده (b)  
 برجی از مکان بیرون برجی در مکانستی  
 از آن پایدگی همسایه با عقل گرانمایه  
 ازین زاینده گی همسایه با یونان زمانستی  
 زان بر علی سینا ازین اشراق سینائی  
 بزیر خاک تازی پامی کوبان کف زمانستی

3. Answer any two of the following :—

26

- (a) Give a critical appreciation of the poetry of Rūmī or Qā'ānī.  
 (b) Compare Sa'dī and Ḥāfiz as poets and Sūfis.  
 (c) Discuss the important sources of the *Shāhānma*. Was the book composed at the instance of Sulṭān Maḥmūd ?

4. (a) Write notes on any four of the following :—

8

- اصحاب کهف - برات - سلطان غیاث الدین - روز  
 السی - شکوه آصفی - سلطان ابو الفوارس - کیانیان -

(b) Write philological notes on any four of the following :—

8

- مشیت - دستور - ارجمند - سپنج - رستا خیز - آفتاب

(c) Substitute purely Persian words for any six of the following :—

6

- نصیحت - جواب - حکیم - مشرق - مغرب - حکم -

عذر علم - قد

5. (a) Note the archaisms in the following verses :—

6

- (i) گمانم چنان بد که تا سالیان  
 بماند بمن تاج و تخت کیان  
 (ii) ابا شادمانی ر با آیمنی  
 ز بد : در روز دست آهرمنی

(iii) دُزین سو بشد نامداری دلیر  
کجا نام ار بود گرشاسپ شیر

(b) Expand the idea contained in :—

10

حافظ بخود نپوشید این خرّقه می، آلود  
ای شیخ پاکدامن معذور دار مارا

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

12

القصه زمان حرب و آران طعن و ضرب از چاشتگاه تا  
عصر تنگ امتداد یافت - چون موضع جنگ در سمت  
شرقی و معسکر رومیّه در جانب دشت اتفاق افتاده - و  
آب دجله در تصرف رومیّه و مرسوم شدت تموز بود - از  
یکطرف لشکر شدید به سبب صولت سورت گرما و از طرف  
دیگر سپاه قلب سوز عطش سخت بی انتهای بعدی نالیده  
کین را اشتعال دادند که حوت در نابه فلتک بریان و  
عین الثور بر تشنه کامی شیران بیشه و غا گریان میشد \*

ز خورشید گران مشوش همه

که بود آب آن چشمه آتش همه

چنان آفتاب آتش افروختی

که نامش زبان در دهان سوختی

چو مرغی شدی در هوا جلوه گر

ز تاب خورش سوختی بال و پر

دل خاره کلب از تف و تاب بود

سر کوه را چشمه آب بود

سمندر کزر آتش افرورختی  
اگر سری آب آمدی سوختی

2. (a) Give the singular or plural, as the case may be, of the following words :— 5

نور - حوت - آوان - حرب - قصه

(b) Point out the difference, if any, between رزم and رزمیه 4

(c) Write a geographical note on دجله. Why is it so called? 6

(d) State the case and antecedent of the pronoun in the underlined words in the above passage. 6

3. Explain any two of the following :— 16

(a)  
کم گر و بجز مصلحت خویش نگر  
چیزیکه نپرسند تو از پیش نگو  
دادند در گوش و یکزبانت ز آغاز  
یعنی که در بشنور یکی پیش نگو  
هر بنده که خدمت شایسته میکنند (b)

از عرصه زمانه برد گوی اقتدار  
خواهی چو سرمه جایی بچشم دهند خلق  
آئین خالق و شیوه خدمت کن اختیار  
گر فتابد بسینه پرتو علم (c)  
مهبط فیض معرفت نشود  
رخ یاقوت تا نه پردازند  
زیر تاج سلطنت نشود

4. Write in Persian short historical notes on :— 9

الپ ارسلان - بهرام گور - خسرو پرویز

5. Translate into English :— 14

در وسط خیابان حوضی است که فواره ارسى ذرع بالا  
رفته و از آن بلندی ذرات مائیه چون سوده الماس در روز از  
شعاع آفتاب و در شب از پرتو چراغ برقى تلالو طبیعى خود را  
می نماید و صفای سحرناهای خود را باطراف میپاشد - چون  
وارد این شارع میفویئى شدیم - هر قدم که بر میداشتیم ملتهق

حالت رفقا خاصه مصطفی بودم - تغییر حالت، ار از حیرت زیاد و شغف تعجب آمیز ار از مشاهده اینهمه مناظر و مرایای معیر العقول که هر لحظه در وجنات و سیمای ار منطبق میشد و حرکت چین جبین و سرعت دوران حدقه چشم ار که شارح آنها بود در کمال وضوح می خواندم - ولی سکوت نمودم که یکی از ما سر صحبت را باز کند - در این بین صدای دلنواز احمد حالت سکوت ما را برهم زد \*

6. Show that عروض or the art of versification is a ramification of the art of music. 4

7. Scan any one of the following, naming the بحر with the 8  
:— زحاف

(a)  
باز در اطراف باغ آتش گل در گرفت  
مرغ برسم مغان زمزمه از سر گرفت

(b)  
چیست گوئی باده گلگون مصفا جوهری  
عشقا پروردگاری حسن را پیغمبری

(c)  
بوی یار من ازین سست وفا می آید  
گلم از دست بگیرید که از کار شدم

8. Re-write one of the following in your own simple Persian, without altering the sense :— 16

## A

مقدری که بحکم اِنَّا زَيْنَا السَّمَاءَ الدُّنْيَا بِزَيْنَةٍ الْكَوَاكِبِ  
مصایبیم بزمگاه افلاک را بزیر چراغان ثوابت و سیار بر  
آراسته - و مصوری که سطور الراح زمین را از چهره کشائی  
تصورات الوان نباتات پیراسته - غفورست که نائره آتش  
عضبناک را بمقتضای سَبَقَتْ رَحْمَتُهُ غَضَبَهُ بزال ینابیع  
عفور مغفرت فرو نشاند - و پنبجه تطاول ظلم را بقوت  
بازوی عدل پیچاند - و ابر گوهر بار عطای عمیمش  
طراوت بخش مزرعه بیم و امید - عنایت دلنوازش قفل

غنچه اجابت را کلید - جواهر سرمه اطاعت فرمانش جلا  
افزای دیده ایمان است \*

B

پادشاه غرق خیال روز را بشب آورد - خوابید - همان  
ملک دیشبی نازل شد - گفت کامبیز تو در ارامر روح الله  
که تو را بر گزیده و میخواست بواسطه تو نشر مذهب پاک  
خدا پرستی را بکند با زن ناقص العقل معرض شو  
نمودی - حال آنکه در ملک تو هیچ فتنه حادث نشود -  
هیچ کس مخالفت تو را نمیکند - احدی از قواد و رجال با  
تو دل بد ندارد - جز آن زن که تو او را صادق میدانی - و  
سخن او را بصلاح دید روح الله ترجیح می دهی - بلکه اول  
تو را برفتن ترغیب نمود که به اغراض اویسی نبری - بعد  
باقدمات تو موانع نشان داد - و بترک تاج و مرگ  
تو را تخریف کرد - و کتمان رؤیا را توصیه نمود که رحمت  
تو زیاد گردد \*

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

25

(a) از آنجا که بنی نوع بشر را بتجربت معلوم افتاده  
که هر وقت غیاهب سختی و ظلمت بدبختی شخص را  
فرا گرفت آنوقت است که نیرسعادت و نیک بختیش  
از افق اقبال طالع میشود چنانکه گفته اند هر ابتدائیرا  
آفتهای و هر عسری را یسریست - ما هم چون با این  
بیچاره های بدبخت که فی الواقع از ما بدبخت تر بودند



تلافی نمودیم یقین کردیم که دیگر روز بدبختی و معنت  
ما بآخر رسیده و سستی ایام پایان آمده اکنون هنگام  
آنست که دستختی از غیب بیرون آمده کاری بکند - خود را  
بشارت وصال با شاهد امانی و وصول نعمت کامرانی  
می دایدیم - شوهرم آن کسالت روحانی و انقباض خاطریکه  
داشت و با ما پیوسته زفتی و درشت خوئی میکرد،  
یکمرتبه حالتش تغییر کرده منبسط و کشاده رو شد طبعش  
ساز جوانی کرد و با ما آغاز ملاطفت و مهربانی \*

(b) بدانکه غضب مفرط از مهلکات عظیمه است و بسا  
باشد بامری مرده شود که باعث هلاکت ابد و شقاوت  
سرمد گردد چون قتل نفس یا قطع عضو ازین جهت  
گفته اند غضب جنونی است که دفعتاً عارض میگردد  
و بعضی از حکما گفته اند که کشتی که بگرداب افتاده باشد  
و موجهای عظیم فرو گرفته و بادهای شدید آنرا بهر طرف  
افکنده بخلاص و نجات نزدیکتر است از کسیکه شعله غضبش  
بالتهاب آمد باشد \*

25

2. Translate into English :-

گفتم بیا که فصل بهار آمد ای نگار  
گفتا برو که وصل نگارین به از بهار  
گفتم که یار یافست هزاران به گلستان  
گفتا ز گلستان رخ من به هزار بار  
گفتم که لاله داغ بدل دارد از چه روی  
گفتا ز روی من دل لاله است داغدار  
گفتم چو سرور کی بکنارم قدم نهی  
گفت آنزمان که رانی از دیده جریبار  
گفتم بزیر سایه گیسو رخ تو چیست  
گفت ار بکس "نگوئی خورشید سایه دار

گفتم مگر بقدر زلف تو عاشق  
 گفتا بلی بسرور روان عاشق است مار  
 گفتم که زلفگان تو بر چهره چيستند  
 گفتا بروم طایفه ز اهل زنگبار  
 گفتم که اختیار کنم جز تو دلبری  
 گفتا که عاشقی نکند کس با اختیار  
 گفتم ازان بترس که آهن دلی کنم  
 گفت آن بری نیمه که ز آهن کنم فرار  
 گفتم غزال چشم تو هست از چه شیر مست  
 گفتا ز بسکه شیردلانرا کند شکار  
 گفتم بآهوان در چشم تو عاشقم  
 گفتا خموش گردن شیر زیان مار  
 گفتم رسید جان بلبم ز انتظار تو  
 گفت آنقدر بمان که بر آید ز انتظار

3. Translate into Persian :—

50

(a) I was surprised to observe the dexterity with which our chief led us through the thick forests that clothe the mountains which border the plains of Qipchak. The dangers of the precipices and the steep ascent were something quite appalling to a young traveller like me ; but my companions rode over everything with the greatest unconcern, confident in the sure-footedness of their horses. Having once ascended the mountains we entered upon the arid plains of Persia, and here my master's knowledge of the country was again conspicuous. He knew every summit the moment it appeared, with the same certainty as an experienced Frank sailor recognizes a distant headland at sea.

(b) The river was not fordable, and there was but one boat. We therefore pushed along the northern bank till we reached the village, where we were told there were boats and a more convenient ferry, nor were we disappointed. We crossed with ease during the day on which we arrived opposite the place,—the men swimming their horses across, and the plunder and baggage being brought over by the boats. A few hundred men attempted to defend the town, but it was carried by forcing open the gate, and afterwards plundered. We lost some of our men, and I was grazed on the leg by a bullet, and disabled from taking an active part in the sack of the place. Pir Khan and Moti were not idle, and brought a goodly heap of jewels and coins to swell the general stock.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English, adding explanatory notes where necessary :— 12

۱۰ ر

درو بنگر به بین آنشخص دیگر  
یکی ره باز بین تا چیست آنکس  
نه اینست و نه آن بس کیست آنکس  
چو من هستم بذات خود تعین  
نمیدانم چه باشد سایه من  
عدم با هستی آخر چون شود ضم  
نباشد نور و ظلمت هر دو باهم  
چو ماضی نیست مستقبل مه و سال  
چه باشد غیر ازین یک نقطه خال  
یکی نقطه است و همی گشته ساری  
تو او را نام کرده مهر جاری

2. How does Shabistari answer the question 8

چه جزو است آنکه از کل فزونست  
طریق جستن آن جزو چون است

Give the substance in your own Persian.

3. State the cause which led Shabistari to write his *Gulshan-i-Rāz*. 6

4. Explain fully the philosophical idea contained in one of the following :— 10

A

اجزای عالم چون نبات است  
که یک قطره ز دریای حیات است  
زمان چون بگذرد بر وی شود باز  
همه انجام ایشان همچو آغاز  
رود هر یک از ایشان سری مرکز  
که نگذارد طبیعت جوی مرکز

نگر تا قطره باران ز دریا  
چگونه یانت چندین شکل واسما

B

صال اولین عین فراق ایست  
مران دیگر ز عند الله باقیست  
بقا اسم وجود آمد ر لیکن  
بجائی کر بود سایر چو ساکن  
مظاهر چون فتد بر رفیق ظاهر  
در اول می نماید عین آخر  
هر آنچه هست بالقوه درین دار  
بفعل آمد دران عالم بیکبار

5. Write notes on any four of the following :—

8

نفس کل - سبع المثانی - مقام فطرت - الست برکم -  
عالم مثال - جبریه - عرض و جواهر - علت مادی \*

6. Translate into English :—

10

روى دیلم دیدم از غم موى ژوپین شد مرا  
همچون موى دیلم اندر هم شکست اعضاى من  
چون رباهم کسه خشکست و خزینه خالی است  
پس طنابم در گلو افکنده اند اعدای من  
ای عفا الله خواجگانی گز سر صفرای جاه  
خوانده اند امروز اباد الله بر خضرای من  
چون زر از پروای عزت چون گل از پروای عیش  
نیست شان پروانه وار از بیخودی پروای من

7. Explain in Persian any two of the following noticing the allusion contained therein :—

8

(a) سامری سیرم نه موسی سیرتم تا زنده ام  
درسم گوساله آلاید ید بیضای من

(b) از پس سنگ سیه بوسه زدن گاه رداع  
چشمه خضر ز ظلمات مفاجا بینند

(c) مرسی از بهر صفورا کند آتش خراهی  
و ان شبانیش هم از بهر صفورا بینند

8. Give in your own words the substance of :—

8

ماه نر دیدی حمائل ز آسمان انگيخته  
اختران تعریذ سیمین پیکران انگيخته  
شب ز انجم کرده بر گرد حمائل طفل رار  
سیمهای قل هو اللهی عیان انگيخته  
صحف مینا زاده آیتها گزارش کرده شب  
از شفق شنگرف راز مه لیفدان انگيخته  
شب گوزن افکنده گوئی شاخش آنکه در هرا  
خونش از نیلوفر چرخ ارغوان انگيخته

9. Write a short note on خاقانی as a poet or *qasida* writer.

10

10. Translate into Persian :—

20

Aurangzeb lost no time in obeying the invitation of his brother, and hastened to join him with all the forces he was able to collect. But conscious that he viewed Murad also as his rival, and was likely to excite in his mind a similar feeling, he used every false and flattering expression which could inspire with confidence his naturally open and unsuspicious heart. He professed to consider him as alone fitted for the throne of Hindustan, to which he was called by the desire of the people ; and as one to whose elevation it would be his pride to contribute, though his wish was only to find some tranquil retirement, where he might devote the rest of his days to religious contemplation.

### FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English :—

10

شاعری صناعتی است که شاعر بدان صناعت اتساق  
مقدمات موهومه کند و التیام قیاس منتجه بر آنجه که  
معنی خرد را بزرگ و بزرگ را خرد و نیکورا در لباس

زشت و زشت را در حلیه نیکو جلوه دهد و بابهای قوتهای  
غضبانی و شهوانی بر انگیزد تا بدان ایهام طبایع را  
انبساطی و انقباضی بود و امور عظام را در نظام عالم  
سبب گردد \*

2. Answer any two of the following :—

20

(a) Name and explain the various sub-divisions of حواس خمسة  
باطن حواس خمسة ظاهر and باطن, as given in the *Chahār Maqāla*.

(b) Give a brief sketch of the life of Abu'l Faḥr and assign his place  
in Persian prose.

(c) Explain, after the author of the *Akhlāq-i-Jalālī*—

آدمی زاده طرفه معجز نیست  
از فرشته سرشته رز حیوان  
گر کند مهمل این شود کم ازین  
در کند قصد آن شود به ازان

3. (a) Write notes on any four of the following :—

4

اسمای متقابلة الهی - وسط بین الاضداد - شرایط  
جنی - باربد - نسانس - عقل نظری

(b) Who was the author of the *qasida* beginning with

6

چون پرند نیلگون بر روی پوشد مرغزار

When was the above *qasida* composed? Discuss

4. Answer either Group A or Group B.

#### GROUP A

(a) Translate into English :—

8

ثم قال الملك للحكيم فما الراى الصواب عندك  
فى امر هذه الطوائف الواردة المستجيرة لنا وعلى اى حال  
نصرفهم من بلدنا راضين بالحكم الصواب - قال الحكم  
الراى الصواب لا ينتج الا بعد التثبت والتانى و الروية  
و الاعتبار بالامور الماضية \*

(b) Explain in Persian :—

8

والذين معه اشداء على الكفار رحماء بهنهم تراهم ركعا  
والذين يبتغون فضلا من الله ورضواناً

- (c) Write notes on any four of the following :— 6  
 مسجد العصرام - حديبيه - نمرود - كشاف - ذر النوارين
- (d) Give an account of the life of the author of تفسیر حسینی 8
- (e) Translate into Persian :—(i) his father is old; (ii) Ahmad is a good boy; (iii) will you go to Patna?; (iv) no, I will go to Dacca; (v) I have a good horse; (vi) take your books and go to school. 30

## GROUP B

- Write an essay in classical Persian on one of the following subjects :— 60
- (a) The *Shāhnāma* : its sources—the persons who took part in its composition—its importance.
- (b) 'Umar-i-khayyām : important sources of his biography—a critical appreciation of his *Rubā'īyyāt*—his philosophy.
- (c) The origin and development of Persian poetry during the pre-Sāmānid and the Sāmānid periods.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

## MUSLIM HISTORY

*Answer any THREE of the following*

1. Give an account of the battle in which the Arabs, before conversion to Islām, gained a victory against the Persians. 10
2. Who were the Bāṭiniyyah (باطنیه) ? Describe their secret doctrines and methods of propaganda. Who is the head of the sect to-day? 10
3. How did the political power gradually pass away from the Arabs to the Persians during the rule of the 'Abbāsids? 10
4. Name the kingdoms which sprang up from the ruins of the سلجوقی empire. 10
5. Who were the Sāfavis? How did they gain the throne of Persia? What did they do to bring about the political unity of the country? Compare their reign with that of their immediate predecessors in regard to the patronage of arts and letters. 10

## HISTORY OF PERSIAN LITERATURE

*Answer any FOUR of the following*

1. Describe the efforts of the last Sāsānī king of Persia to revive the ancient religion and literature of the country. 10
2. Trace the origin and growth of Persian poetry after the conquest of the country by the Arabs. 10
3. Who was Rūdākī? Why is he regarded as the first real poet of Muslim Persia despite the fact that several poets flourished before him? 10
4. Sa'dī is called the 'father of the *ghazal*'. Criticize this verdict. 10

5. Enumerate six books of outstanding merit in Persian prose on history and ethics, giving in each case the name of the author and the time at which he flourished. 10

6. How and why did the Mongol rule in Persia prove so favourable to the rapid growth of Sūfism? Name some of the most renowned Sūfīs of the time with the achievements and the peculiar features of the writings of each. 20

### RHETORIC AND PROSODY

1. Define and illustrate any four of the following :— 6

تجنیس تام - مطابقت - ذر القافیتین - لف و نشر  
مرتب - رد العجز علی الصدر - مراعاة النظیر \*

2. Name the figures of speech in any three of the following, and explain the nature of each of these figures :— 9

(a)  
دانی که بر نگین سلیمان چه نقش بود  
خطی بزر نوشته که این نیز بگذرد

(b)  
بگردون تیره ابری بامدادان بر شد از دریا  
جواهر خیز و گهر ریز و گهر بیز و گهرزا

(c)  
غنی روز سیاه پیر کنعان را تماشا کن  
که روشن کرد نور دیده اش چشم زلیخا را

(d)  
گر مطرب حریفان این پارسی بخواند  
در رقص و حالت آرد پیران پارسارا

3. Define and illustrate any four of the following :— 6

رکن مزاحف - قافیة متدارک - اخرب - ایطای جلی -  
خبس - حرف قید

4. Scan any three of the following, naming the metre in each case :— 9

(a)  
از نسیم آزرده میگردد گل گلزار ما  
بر نمی تابد دم عیسی دل بهمار ما

(b)  
میازار مروری که دانه کش است  
که جان دارد و جان شیرین خوش



(c)  
 آسایش دوگیتی تفسیر این دو حرف است  
 با درستان تلمطف با دشمنان مدارا  
 (d)  
 کس زبان مرا نمی فهمد  
 به عزیزان چه التماس کند

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## PERSIAN—PASS

Examiners— { MAULVI M. MAHFUZUL HAQ, M.A.  
 MAULVI SYED MUZAFFARUDDIN AHMAD, M.A.  
 AGA MD. KAZIM SHIRAZI.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate into English :—

24

(a)  
 کنون بادشاهی شاپور گوی  
 زبان بر کشا و از می و سرور گوی  
 چو شاپور بنشست بر تخت داد  
 کلاه دل امروز بر سر نهاد  
 شدند انجمن پیش او بخردان  
 بزرگان فرزانه و موبدان  
 چنین گفت با نامور انجمن  
 پیژگان پردانش رای زن  
 منم پاک فرزند شاه اردشیر  
 سراینده دانش و یادگیر  
 همه گوش دادید فرمان من  
 مگردید یکسر ز فرمان من

(b)

ماه روزه گشت در عهد عمر  
 بر سر کوهی دویدند آن نفر  
 تا هلال روزه را گیرند فال  
 آن یکی گفت ای عمر اینک هلال  
 چون عمر بر آسمان مه را ندید  
 گفت کاین مه از خیال تو دمید  
 ورنه من بینا ترم افلاک را  
 چون نمی بینم هلال پاک را  
 گفت تر کن دست بر ابرو بمال  
 آن گه آن تر بر نگر سری هلال  
 چونکه از تر کرد ابرو مه ندید  
 گفت ای شه نیست مه شد ناپدید

2. Explain fully any three of the following :—

18

(a)

ای دل از سیل منا بنیاد هستی بر کند  
 چون ترا نوح است کشتیان ز طوفان غم مخور

(b)

در عیش نقد کوش که چون آبخور نماید  
 آدم بهشت روضه دار السلام را

(c)

یکیست عین هزار از چه هست غیر هزار  
 که مختلف بظهور اند و متفق بگهر

(d)

یک قدم زد آدم اندر ذرق نفس  
 شد فراق صدر جنت طوق نفس

3. Write short notes on any five of the following :—

10

- ابرو جهل - رادی ایمن - سامری - منصور  
 - نجاشی - اهرمن - رفرف - لات ز منات

4. (a) Give in your own words the story of :— 10

- *Either*, رزم شاپور با رومیان و گرفتار شدن بزانوش  
*Or*, کرامات ابراهیم ادهم بر لب دریا

(b) Give the opposite number of any five of the following :— 5

دیوان - طریقه - قصر - روزه - حدائق - عوالم - صورت

5. Give a short account of the life of Qā'ānī and discuss his merit as a *qaṣīda*-writer. 12

6. What are the main characteristics of the poetry of Ḥāfiẓ ? Discuss. 13

7. *Either*, Name the various kinds of *īzāfat*, giving examples in each case. 8

*Or*, Expand the idea contained in :—

هان مشر نورمید چون راقف نه از سر غیب  
 باشد اندر پرده بازیهای پنهان غم مخور

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English —

A

24

از خواب بیدار شدم - دیدم از بستر بوی گل  
 می آید - خانه را بوی عطر پیچیده - چراغ طلا که  
 بالای سر من میسوخت ده مقابل بیشتر روشن است -  
 اندکی تأمل کردم که هیجانم ساکت شود - و تاثیر  
 خواب و نفوذ تحصیل خزانه بزرگ به اعصاب من  
 قدری تخفیف یابد - و پرتو صورت ملوکوتی شموئیل از  
 آئینه تصور من محو گردد - دیدم بوی عطر و زیادتی  
 نور شمع حقیقت دارد نه تصویری و نفوذ رویاست -  
 خادم حرم را صدا زدم که ملکه را بیدار نماید - آمد  
 خواب خود را گفتم - ملکه گفت - عجب خواب دیده -  
 از رویای صادقه است - باید تدارک سفر را دید و

عازم شد - اما مقصود و طرف توجه خود را بهیچ یک از امرا خبر نده که طرف عزیمت ترا ندانند - پرسیدم اگر بدانند چه میشود - گفت هوای گنج راگان مدعیان سلطنت را به طمع و حسد آرد - بتر میشنوند - بمخالفت تو همدست میشوند \*

## B

چون سلطان دار القرار ابتلا یعنی مهر جهان آرا بعزم تسخیر شهرستان حمل رایت اعتلا افراخته - با لشکر بهار برهمزن هنگامه بهمن و غارتگر شهر دی گشت - افغان هزار دستان با هزار داستان شور افزای فرج آباد چمن گردید - و محمردیان با کمان شوکت و استیلا دست بتاخت و تاز دراز کرده باندیشه اینکه امداد از طرفی باصفهان خواهد رسید سالک جمیعت خود را از هم نمی پاشیدند - اعیان دولت فکری که برای کسر شوکت خصم اندیشیدند این بود - که سلطان محمود میرزا ولد اکبرخان شهید را در هفتم رجب به ولیعهدی آردند - و چون آثار رشد و فطانت از ناصیه حال او تفرس نمی شد - بعد از چهار روز ار را بدمرقابی راجع - و صفی میرزا برادر او را بجای او بر مسند ولایت عهد تکیه دادند \*

2. (a) Point out all the peculiarities of modern Persian idiom which you find in extract A of Question 1. 6

(b) Give the original signification of each of the following and connect it with the sense in which each is used in the extract in Question 1 :— 5

اصفهان - ولیعهد - حمل - حرم - شمع

(c) Write brief historical notes on خان شهید and شمرویل 6

(d) Explain سلطان دار القرار ابتلا and ده مقابل بیشتر 6

3. Give a concise account of the conquest of Persia by the Afghans shortly before Nadir appeared on the scene. 10

4. Explain any one of the following :—

12

(a) اجساد موجودات را جسد کبیر مقناطیسی خلق کردم که همه اجسام بزرگ و کوچک را جذب کند و بخود چسباند - در اجساد کوچک قره افریدم که در مقابل جذب اجساد بزرگ دفاع نماید \*

(b)

سر مشق تازه روئی فردوس راحت است  
هر دل که نقد بندگیش کرد اقتباس  
هر چین از بنامه ازادگی خطی است  
پیشانیی که خاک سجودش بود مساس  
مقبول کائنات و سزاوار جنت است  
هر مقبلی که بر در ارگشت رو شناس

5. Write etymological notes on any four of the following words :—

6

فردوس - بهمن - هنگامه - شهرستان - رائگان - بستر - خواب

6. In scanning a verse (a) which letters are and which are not counted, and (b) how are groups of *sākins* or consonants in the middle of a verse treated?

7

7. Why are the following so called :—

10

? حشو - رکن - بیت - فاصله - رتد - سبب - عروض - بحر

8. Scan any one of the following couplets and name the metre :—

8

(a)

من از آن حسن روز افزون که یوسف داشت دانستم  
که عشق از پرده عصمت برون آرد زلیخا را

(b)

بر تراضیهای دشمن تکیه کردن ابلهی است  
پائیبوس سیل از پا افکند دیوار را

(c)

در بزم رصال تو بهنگام تماشا  
نظاره ز جنبیدن مژگان گله دارد

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate into English :—

A

30

حکیمی از حکمای عجم نیز بآموزگاری بهرام گور آمد  
و شاهزاده بمحض شنیدن مطلبی و مسئله آنرا یاد میگرفت  
و در سن دوازده سالگی خود از فضلاء بشمار میآمد - و  
بعضی را عقیده اینست که بهرام علاوه بر معلمین عرب  
و عجم آموزگاران رومی و یونانی هم داشت - در هر حال  
چون کربک سعادت شاهزاده از افق کمال طلوع نمود و  
در آداب سوارپی و شکار نیز بمقامی بلند رسید اسپیی  
خواست که درخواست که در خور او باشد حکمران  
حیره اسپ خاص خود را حاضر کرد روزی بر پشت آن  
اسپ در شکارگاه گله از گورخر دید بطرف آن گله شتافت  
و چون نزدیک شد دید شبری بر پشت گورخری بسته  
میخواهد آنرا پاره کند بهرام تیری بجانب شیر انداخت  
آن خدنک شیر و گوررا بهم درخته و یک ثلث تیر هم  
از آن گذر کرده بخاک نشست و در زمین فرو رفت  
همراهان شاهزاده از نیروی بازو و شست او حیرت و  
تعجب نمودند و گمان میبرد که از آن روز او را بهرام گور  
گفتند یا از کثرت میل بشکار گور ملقب باین لقب  
شده باشد \*

B

20

مها زورمندی مکن بر کهان  
که بر یک نمط می نماید جهان  
دل درستان جمع بهتر که گنج  
خزینده تهی به که مردم برنج

مینداز در پای کار کسی  
 که افتد که در پایش افتی بسی  
 تحمل کن ای ناتوان از قوی  
 که روزی تواناتر از رمی شوی  
 بهمت بر آر از ستیزنده شور  
 که بازمی همت به از دست زور  
 لب خشک مظلوم را گو مرخند  
 که دندان ظالم بخوانند کند  
 به بانگ دهل خواجه بیدار گشت  
 چه داند شب پاسبان چون گذشت  
 خورد کاررانی غم بار خورش  
 نسوزد دلش بر خر پشت ریش  
 گرفتیم کز افتادگان نیستی  
 چو افتاده بینی چرا بایستی  
 برینت بگویم یکی سر گذشت  
 ، سستی بود ز

2. Translate into Persian :—

50

(a) As soon as they were fairly out of sight, he despatched one of his shepherd's boys to his son in the mountains, ordering him to bring back the mare ; and when the animal was safely lodged in the women's tent, he called together the elders of his tribe, consisting of his own and his wives' relations, who were encamped in our vicinity. He explained to them the situation in which he was placed ; showing that his and their destruction was inevitable should they continue any longer in the territory of the Pāshā, who would not fail to seize this opportunity of levying fines and exactions, and reducing them to want and beggary.

(b) When he had done speaking, an old shepherd, who had great experience in all that related to the seasons, and considerable knowledge of the country between our mountains and those of Persia, spoke as follows : ' If we go, we must go immediately ; for a day's delay might stop us. The snows on the mountains are already beginning to melt, and the torrents will be swollen in another week, so that we shall not be able to get the sheep across them. Besides, it is now about three weeks to the day when the sun enters the sign of the 'Ram', at which time our ewes will, please God, bring forth in plenty ; and they ought to have performed their journey and be at rest long before that time.'

## FRENCH—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate three of the following passages :—

24

- (a) J'attendais le moment marqué dans ton arrêt,  
 Pour oser de ton peuple embrasser l'intérêt.  
 Ce moment est venu : ma prompte obéissance  
 Va d'un roi redoutable affronter la présence.  
 C'est pour toi que je marche. Accompagne mes pas  
 Devant ce fier lion qui ne te connaît pas,  
 Commande en me voyant que son courroux s'apaise,  
 Et prête à mes discours un charme qui lui plaise.  
 Les orages, les vents, les eaux te sont soumis :  
 Tourne enfin sa fureur contre nos ennemis.
- (b) Ah ! que ce temps est long à mon impatience !  
 C'est lui, je te veux bien confier ma vengeance,  
 C'est lui qui, devant moi refusant de ployer,  
 Les a livrés au bras qui va les foudroyer.  
 C'était trop peu pour moi d'une telle victime :  
 La vengeance trop faible attire un second crime.  
 Un homme tel qu'Aman, lorsqu'on l'ose irriter,  
 Dans sa juste fureur ne peut trop éclater.  
 Il faut des châtimens dont l'univers frémissse ;  
 Qu'on tremble en comparant l'offense et le supplice.
- (c) Je vois que la sagesse elle-même t'inspire.  
 Avec nos volontés ton sentiment conspire.  
 Va, ne perds point de temps. Ce que tu m'as dicté,  
 Je veux de point en point qu'il soit exécuté.  
 La vertu dans l'oubli ne sera plus cachée.  
 Aux portes du palais prends le Juif Mardochée :  
 C'est lui que je prétens honorer aujourd'hui.  
 Ordonne son triomphe, et marche devant lui,  
 Que Suse par ta voix de son nom retentisse,  
 Et fais à son aspect que tout genou fléchisse.
- (d) Mortel chéri du ciel, mon salut et ma joie,  
 Aux conseils des incantants ton roi n'est plus en proie.  
 Mes yeux sont dessillés, le crime est confondu.  
 Viens briller près de moi dans le rang qui t'est dû.  
 Je te donne d'Aman les biens et la puissance :  
 Possède justement son injuste opulence.



Je romps le joug funeste où les Juifs sont soumis,  
 Je leur livre le sang de tous leurs ennemis ;  
 A l'égal des Persans je veux qu'on les honore,  
 Et que tout tremble au nom du Dieu qu'Esther adore.

2. (a) Give a short appreciation of the use and function of choruses in Racine's tragedy. 10

(b) Show the influence of Racine's religious feelings in the treatment of his subject-matter. 10

(c) Write a short account of the connexion of Saint-Cyr and Madame de Maintenon with the writing and production of *Esther*. 6

3 (a) Write the present and past participles of—*lire, savoir, naître, s'asseoir, rire, pouvoir*; and the imperative mood of—*s'en aller, dire*. 8

(b) What is the rule in French for the place of the adverb? Give examples. 6

(c) Account for the following subjunctives :—*s'apaise* (Question 1 (a), line 7); *plaise* (Question 1 (a), line 8); *fléchisse* (Question 1 (c), line 10). 6

4 Translate into English one of the following :— 30

(a) Deux cortèges se sont rencontrés à l'église.  
 L'un est morne :—il conduit le cercueil d'un enfant ;  
 Une femme le suit, presque folle, étouffant  
 Dans sa poitrine en feu le sanglot qui la brise.  
 L'autre c'est un baptême :—au bras qui le défend  
 Un nourrisson gazouille une note indécise ;  
 Sa mère, lui tenant le doux sein qu'il épuise,  
 L'embrasse tout entier d'un regard triomphant !—  
 On baptise, on absout, et le temple se vide.  
 Les deux femmes, alors, se croisant dans l'abside,  
 Échangent un coup d'œil aussitôt détourné :  
 Et, merveilleux retour qu'inspire la prière,—  
 La jeune mère pleure en regardant la bière,  
 La femme qui pleurait sourit au nouveau-né !

(b) Oui, je suis un ingrat ! car, grâce à vous, j'ai pris  
 L'existence en dégoût et moi-même en mépris.  
 Quand mon front soucieux à la vitre s'appuie  
 J'entends autour de moi dire : ' Le roi s'ennuie.'  
 Moi-même je le dis parfois. Mais si tous ceux  
 Qui me voient contempler la rue en paresseux,  
 Pouvaient comprendre alors avec quel œil d'envie  
 Je regarde passer le travail et la vie,  
 Monarque enseveli dans mon oisiveté  
 Et condamné par vous à l'inutilité  
 Certes, ils admireraient qu'en mon âme la haine  
 N'ait pas vaincu plus tôt la patience humaine :  
 Mais la mesure est comble enfin ! L'homme et le roi  
 D'un égal désespoir se révoltent en moi.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate any two of the following passages into English :— 28

(a) Si certains esprits vifs et déciais étoient crus, ce seroit encore  
 trop que les termes pour exprimer les sentiments ; il faudroit leur parler

par signes, ou, sans parler, se faire entendre. Quelque soin qu'on apporte à être serré et concis, et quelque réputation qu'on ait d'être tel, ils vous trouvent diffus. Il faut leur laisser tout à suppléer, et n'écrire que pour eux seuls : ils conçoivent une période par le mot qui la commence, et par une période tout un chapitre : leur avez-vous lu un seul endroit de l'ouvrage, c'est assez, ils sont dans le fait et entendent l'ouvrage. Un tissu d'énigmes leur seroit une lecture divertissante ; et c'est une perte pour eux que ce style estropié qui les enlève soit rare, et que peu d'écrivains s'en accommodent.

(b) Si vous êtes si touchés de curiosité, exercez-la du moins en un sujet noble : voyez un heureux, contemplez-le dans le jour même où il a été nommé à un nouveau poste et qu'il en reçoit les compliments ; lisez dans ses yeux, et au travers d'un calme étudié et d'une feinte modestie, combien il est content et pénétré de soi-même ; voyez quelle sérénité cet accomplissement de ses désirs répand dans son cœur et sur son visage ; comme il ne songe plus qu'à vivre et avoir de la santé comme ensuite sa joie lui échappe et ne peut plus se dissimuler ; comme il plie sous le poids de son bonheur ; quel air froid et sérieux il conserve pour ceux qui ne sont plus ses égaux.

(c) La science des détails, ou une diligente attention aux moindres besoins de la république, est une partie essentielle au bon gouvernement, trop négligée à la vérité, dans les derniers temps, par les rois et par les ministres, mais qu'on ne peut trop souhaiter dans le souverain qui l'ignore, ni assez estimer dans celui qui la possède. Que sert en effet au bien des peuples et à la douceur de leur jour que le prince place les bornes de son empire au delà des terres de ses ennemis, qu'il fasse de leurs souverainetés des provinces de son royaume.

2. How does La Bruyère describe *Quelques Usages* ? How far does it give a true picture of the society of his own times ? 20

3. (a) What is the function of reflexive verbs in French ? Give three examples to illustrate it. 6

(b) When do you use the subjunctive in French ? Illustrate its use by examples. 6

(c) Write grammatical notes on the words in italics :— 10

L'on contemple dans les cours de *certaines* gens et l'on voit bien, à leur discours et à toute leur conduite, qu'ils ne songent ni à leurs grands-pères, ni à leurs *petits-fils* : le présent est pour eux ; ils n'en *jouissent* pas, ils en abusent.

4. Translate into English :— 30

(a) Ils ne se connaissent pas, seule la raison qui les rassemble leur est commune. Ils en ont l'air gâté, excédé, et ne parviennent pas à manifester de l'indifférence. Pourtant à les bien regarder ils ont quelque chose qui les appauvre : c'est comme un manque d'allégresse physique, un aspect maladif des corps, trop de graisse, ou trop peu, des yeux allumés de fièvre, parfois une infirmité évidente, plus souvent des yeux grisés, éclairés d'un sang misérable. Jamais une joyeuse détente de muscles sain : toute l'assemblée a une lenteur de limace.

(b) La civilisation, la vraie, j'y pense souvent. C'est, dans mon esprit, comme un chœur de voix harmonieuses chantant un hymne, c'est une statue de marbre sur une colline desséchée, c'est un homme qui dirait : 'Aimez-vous les uns les autres !' ou 'Rendez le bien pour le mal !' Mais il y a près de deux mille ans qu'on ne fait plus que répéter ces choses-là, et les princes des prêtres ont bien trop d'intérêts dans le siècle pour concevoir d'autres choses semblables.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Answer the questions marked with an asterisk (\*), and any  
two others*

\*1. Translate into French two of the following :—

50

(a) When I opened my door this morning, my mill was surrounded by a great carpet of hoar-frost. The grass shone and crackled like glass; the whole hillside was shivering. For one day in the year my dear Provence had assumed the disguise of a northern country, and it was among fir-trees fringed with hoar, among tufts of lavender showing an efflorescence of crystal, that I wrote these two ballads, somewhat Germanic in their inspiration, while the frost flashed its white sparks at me, while far above, in the clear sky, great triangles of storks coming from the land of Heine winged their way south toward Camargue, crying: 'It's cold...cold I...'

(b) It is not without reason that history has always been looked upon as the light of ages the depository of events, the faithful witness of truth, the source of good counsels and of prudence, the rule of good conduct and of manners. Without it, confined within the limits of the age and country in which we live, encompassed within the narrow circle of our individual knowledge and of our own reflections, we always remain in a kind of infancy which leaves us strangers with regard to the outer world, and in a profound ignorance of everything that has preceded us and of everything that surrounds us.

(c) 'I shall be away five weeks', he wrote to me: 'I must be back in October for the reopening of school and the licentiate examination. You will go to the post office every Monday and take a postal order for ten francs in the name of Madam Bourgade. Do you know the only thing that has saddened me?' he wrote in a post-script. 'I will unburden myself to you, even though you should laugh at me. There are in this house two big rooms lying idle, with good floors, nice and airy, well furnished, and not used by anybody. I am sure my uncle would let them for next to nothing to any respectable family who might like to take them.'

2. Distinguish between the following, inserting them in sentences to illustrate the meaning :—*le poste* and *la poste*; *le tour* and *la tour*; *le voile* and *la voile*; *le raptur* and *la raptur*; *le mort* and *la mort*. 10

\*3. Translate into idiomatic French the following :—(a) Stick no bills. 10  
(b) Smoking is forbidden. (c) That is too bad. (d) My kind regards to your brother. (e) To build castles in the air.

4. Write down one adjective derived from each of the following 10  
nouns :—*monde*, *passage*, *honte*, *continent*, *liver*, *cheval*, *terre*, *éclat*, *village*, *champ*.

\*5. Explain, with examples, the use of the infinitive preceded by à ; 10  
preceded by de.

6. Who was Clovis? Mention two anecdotes of his life connected 10  
with the 'Soissons vase' and with his victory over the Alamans.

\*7 Compare the three French kings Louis XIV, Louis XV, and Louis 10  
XVI as regards their character and their work.

8. Give particulars about the cause and the events of the conquest of 10  
Algeria by the French.

## LATIN—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

1. Translate into English any *four* of the following, answering also 10  
 the annexed questions :—

- (a) Atque ea diversa penitus dum parte geruntur  
 Irim de caelo misit Saturnia Iuno  
 audacem ad Turnum. Iuco tum forte parentis  
 Pylumni Turnus sacrata valle sedebat.  
 ad quem sic roseo Thaumantias ore locuta est :  
 'Turne, quod optanti diu promittere nemo  
 auderet, volvenda dies, en ! attulit ultro.  
 Aeneas, urbe et sociis et classe relicta,  
 excepta Palatini sedemque petit Euandri.  
 nec satis : extremas Corythi penetravit ad urbes ;  
 Lydorumque manum, collectors armat agrestes.  
 quid dubitas ? nunc tempus equos, nunc poscere currus.  
 rumpe moras omnes, et turbata arripe castra.'

Write a note on *Saturnia*, *Thaumantias*, *Palatini*. Explain the 5  
 tense of *geruntur*, and the mood of *auderet*.

- (b) Volvitur Euryalus leto, pulchrosque per artus 10  
 it cruor inque humeros cervix collapsa recumbit :  
 purpureus veluti cum flos, coccineus atro,  
 languescit moriens, lassove papaveri collo  
 demisere caput, pluvia cum forte gravantur.  
 at Nisus ruit in medios, solumque per omnes  
 Volentem petit, in solo Volente moratur.  
 quem, circum glomerati, hostes hinc cominus atque hinc  
 proturbant. instat non selius, ac rotat ensem  
 fulmineum, donec Rutuli clamantis in ore  
 condidit adverso, et moriens animam abstulit hosti.  
 tum super exanimum sese proiecit amicum  
 confossus, placidaque ibi demum morte quievit.

Give your appreciation of the episode of Nisus and Euryalus. 5

- (c) Durum a stirpe genus, natos ad flumina primum 10  
 deferimus saevoque gelu duramus et undis ;  
 venatu, invigilant pueri, silvesque fatigant :  
 flectere ludus equos et spicula tendere cornu.  
 at, patiens operum, parvoque assueta, niventus  
 aut rastris terram domat aut quatit oppida bello.  
 omne aevum ferro teritur, versaque invencum  
 terga fatigamus hasta, nec tarda senectus  
 deditat vires animi, mutataque virgorem.

canitiem galea premimus; semperque recentes  
comportare iuvot praedas et vivere rapto.

Explain the case of—*gelu, venatu, ludus, operum, iuvenum.* 5  
Scan the third line.

- (d) Agnoscunt longe regem lustrantque choreis. 10  
quarum quae fandi doctissima, Cymodorea,  
ponc sequens dextra puppiū tenet, ipsaque dorso  
eminet, ac laeva tacitis subrempit undis.  
tum sic ignarum alloquitur: 'vigilasne, deum gens.  
Aenea? vigila, et velis immitte rudentes  
nos sumus, Idaeae satro de vertice pinus,  
nunc pelagi nymphae, classis tua. perfidus ut nos  
praecipites ferro Rutulus flammamque premebat,  
rupinus invitae tuae vincula, teque per aequor  
quaerimus hanc genetræ faciem miserata refecit,  
et dedit esse deas, aevumque agitare sub undis.'

Explain the allusion to Antiquities contained in the words—*choreis,* 5  
*vigilasne?...vigila, nymphae.*

- (e) Dixit, telumque intorsit in hostem; 10  
inde aliud super atque aliud figitque volutque  
ingenti gyro: sed sustinet aureus umbo  
ter circum astantem laevos equitavit in orbes,  
tela manu naciens; ter secum Troius heros  
immunem aërato circumfert tegmine silvam.  
inde ubi tot traxisse moras, tot spicula tacet  
vellere, et ungetur pugna congressus iniqua,  
multa movens animo iam tandem erumpit, et inter  
bellatoris equi cava tempora convertit hastam.  
tollit se ariectum quadrupes, et calcibus auras  
verberat, effusumque equitem super ipse secutus  
implicat, electoque incumbit cernuus animo.

Explain briefly, with reference to this passage, some methods 5  
used by Virgil to describe by sounds (vowels, consonants, and rhythm).

2. Either, why did Virgil write the *Aeneid*? How far was he 20  
original and personal (a) in choosing his subject-matter, (b) in working it out?

Or, What comments can you make on the composition and style  
of the numerous speeches found in the *Aeneid*?

2. *Unseen Translation* 20

Plurima lecta rosa est, sunt et sine nomine flores.  
ipsa crocos terpes, liliaque a ha legit.  
carpendi studio paulatim longius errat,  
et don inam est casu nulla secuta comes.  
hanc videt et visam Pluto velociter aufert  
regnaque caeruleis in sua portat equis.  
illa quidem clamabat: 'io! carissima mater,  
auferor!' ipsa suos abscideratque sinus.  
at comites, multo cumulatæ flore puellæ,  
'Persephone', clamant, 'ad tua dona veni.'  
ut clamata silet, montes ululatus implent,  
et feriunt maesta pectora nada manu.  
attonita est plangore Ceres; modo venerat Hennem;  
nec mora, 'me miserum! filia' dixit 'ubi es?'

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## 1. Translate :—

16

(a) Dum Romani tempus *terunt legationibus mittendis*, Hannibal, quia fessum militem preclius operibusque habebat, paucorum usque dierum quietem dedit, stationibus ad custodiam vinearum aliorumque operum dispositis. Interim animos eorum nunc ira in hostes *stimulando*, nunc spe praemiorum accendit: ut vero pro contione praedam captae urbis edixit milium fore, adeo accensi omnes sunt, ut, si ex templo signum datum esset, nulla vi resisti videretur posse. Saguntini ut a proeliis quietem habuerant nec lacescentes nec lacesciti per aliquot dies, ita non nocte, non die unquam cessaverant ab opere, ut novum murum ab ea parte, qua patefactum oppidum ruinis erat, *reficerent*.

(b) Tum discors erat. Regni certamine ambigebant fratres: maior et qui prius imperilarat, Brancus nomine, minore a fratre et coetu iuniorum, qui iure minus vi plus poterant, pellebatur. Huius seditionis peropportuna disceptatio quum ad Hannibalem rejecta esset, arbiter regni factus, quod ea senatus principumque sententia fuerat, imperium maiori restituit. Ob id meritum commeatu copiae rerum omnium, maxime vestis, est adiutus, quam, infames frigoribus, Alpes praeparari cogebant. Sedatis Hannibal certaminibus Allobrogum quum iam Alpes peteret, non recta regione iter instituit, sed ad laevam in Tricastinos flexit; inde per extremam oram Vocontiorum agri tendit in Trigorios, haud usquam impedita via, priusquam ad Druentiam flumen *perrent*.

(c) Quoniam igitur pacto probari potest, insidias Miloni fecisse Clodium? Satis est quidem in illa tam audaci, tam nefaria belua docere, magnam ei causam, magnam spem in Milonis morte propositam, magnas utilitates fuisse. Itaque illud Cassianum, cui bono fuerit, in his personis *valeat*; etsi boni nullo emolumento impellantur in fraudem, improbi saepe parvo. Atqui, Milone interfecto, Clodius hoc assequabatur, non modo ut praetor esset non eo consule, quo sceleris nihil facere posset: sed etiam, ut *us consulibus* praetor esset, quibus si non adiuvantibus, at conventibus certe, speraret posse se eludere in illis suis cogitatis furoribus: cuius illi conatus, ut ipse ratiocinabatur, nec, si possent, reprimere cuperent, quum tantum beneficium ei se debere arbitrarentur; et si vellent, fortasse vix possent frangere hominis sceleratissimi corroborationem iam velustate audaciam.

(d) Quamquam haec quidem iam tolerabilia videbantur, etsi aequabiliter in rem publicam, in privatos, in longinquos, in propinquos, in alienos, in suos irruerat: sed nescio quo modo iam usu obdurnat et percalluerat civitatis incredibilis patientia. Quae vero aderant iam et impendebant, quoniam modo ea aut depellere potuissetis, aut ferre? Imperium ille si nactus esset: omitto socios, exterarum nationes, reges, tetrarchas; vota enim faceretis, ut in eos se potius immitteret, quam in vestras possessiones, vestra tecta, vestras pecunias: pecunias dico? a liberis, *me dūs fidiis*, et a coniugibus vestris nunquam ille effrenatas suas libidines cohibuisset. Fingi haec putatis, quae patent? quae nota sunt omnibus? quae tenentur?

2. Write brief notes on eight only of the following :—*Saguntum*, 16  
*C. Flaminius*, *mancipium*, *actuarus*, *caetrati*, *socii*, *stipendium*, *Herculis columnae*, *Hiero*, *socii navales*, *nomen Latinum*, *dilectus*.

*Either*, Describe Hannibal's preparations for the invasion of Italy, 12  
and indicate the route followed.

Or, Explain the construction of the words italicized in Question 1.

## 4. Write brief notes on :—

15

(a) Ille dies quo Ti. Gracchus est caesus, aut ille, quo Caius, aut quo arma Saturnini oppressa sunt.

(b) Templum Castoris.

(c) Bona Dea.

(d) Sed stultissimus, qui Drusum, qui Africanum, Pompeium, nosmet ipsos, cum P. Clodio conferre audeamus.

(e) Sp. Maelium, qui annona levanda, iacturisque rei familiaris, quia nimis amplecti plebem putabatur, in suspicionem incidit regni appetendi.

(f) Omitto Etruriae festos et actos et institutos dies.

5. In what circumstances was Cicero's speech for Milo delivered? Give a brief account of the judicial system of Rome at the time.

12

## 6. Translate :—

30

(a) Summam video esse in te, Ser. Sulpici, dignitatem generis, integritatis, industriae, ceterorumque ornamentorum omnium, quibus fretum ad consulatus petitionem aggredi par est. Paria cognosco esse ista in L. Murena, atque ita paria, ut neque ipse dignitate vinci potuerit, neque te dignitate superarit. Contempsisti L. Murenæ genus : extulisti tuum. Quo loco si tibi hoc sumis, nisi qui patricius sit, neminem bono esse genere natum facis, ut rursus plebes in Aventinum sevocanda esse videatur. Sin autem sunt amplae et honestae familiae plebeiae : et proavus L. Murenæ, et avus, praetores fuerunt, et pater, quam amplissime atque honestissime ex praetura triumphasset, hoc faciliorem huic gradum consulatus adipiscendi reliquit, quod is iam patri debitus, a filio petebatur. Tua vero nobilitas, Ser. Sulpici, tametsi summa est, tamen hominibus litteratis et historicis est notior, populo vero et suffragatoribus obscurior.

(b) Haec cum animadvertisset, convocato consilio omniumque ordinum ad id consilium adhibitis centurionibus vehementer eos incusavit : primum quod aut quam in partem aut quo consilio ducerentur, sibi quaerendum aut cogitandum putarent. Arriovistum se consule cupidissime populi Romani amicitiam appetisse : cur hunc tam temere quisquam ab officio discessurum iudicaret? Sibi quidem persuaderi, cognitis suis postulatis atque aequitate condicionum perspecta eum neque suum neque populi Romani gratiam repudiaturum. Quod si furore atque amentia impulsus bellum intulisset, quid tandem vererentur? aut cur de sua virtute aut de ipsius diligentia desperarent?

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

## A. PROSE COMPOSITION

## 1. Translate into Latin :—

12

(a) We set sail from Brundisium before sunrise and arrived at our destination on the 13th of May.

(b) He visited Britain, wishing to discover the character of the inhabitants and the size of the country.

(c) Had not these loads been far too heavy for us to carry quickly, we should have arrived yesterday.

2. Put into *Oratio Obliqua* after a verb in a historic tense :— 12

'I am the only man who has survived the battle. The enemy, flushed with recent victory, are advancing, and must even now be not more than three miles from the city. So savage is their temper, that I am sure no one, however old and infirm, will be spared.'

3. Translate into Latin :— 26

His forces being too weak, the general did not venture to fight a battle in the open plain. He encamped on a hill in an advantageous position and determined to wait for the enemy to attack him. If they did so, he knew that they would be doing it with great difficulty, uphill, against a position which was naturally strong and well fortified. But the same evening he received intelligence that another hostile force was approaching from the other direction, and was at no great distance. Fearing that, if he delayed longer where he was, he would be entirely surrounded, blockaded rather than attacked, and compelled in the end to surrender, he changed his plans and gave orders that preparations should be made for striking camp at once.

### B. GRAMMAR

4. What are the adverbs of—*patiens, atrox, facilis*? 5

Give the comparative and superlative of these adverbs, and the Latin for '14 each' and 'with 2,000 horsemen'.

5. Give the future participle of *orior*, the genitive plural of the present participle of *pereo*, and the principal parts of—*gigno, fodio, cupio*. 5

6. Construct sentences, which should be translated, illustrating the use of (a) the supine in -*u*, (b) the predicative dative, (c) the partitive genitive. 6

7. How are wishes expressed in Latin? 4

Construct and translate sentences in illustration.

### C. ROMAN HISTORY

Answer any THREE of the following questions

8. Give an account of the institution of the tribunate of the plebs. 10  
What were the powers and privileges of the tribunes?

9. What were the causes of the First Punic War? 10

Sketch briefly the chief incidents, and state what were the results of the war.

10. Give an account of the reforms of Tiberius Gracchus. 10

11. State what you know about the conspiracy of Catiline. 10

12. Who were the assailants in the battles of Pharsalia, Munda, Philippi, and Actium? 10

What was the direct political effect of each battle?

13. Trace the changes which took place in the treatment and the status of Christians at various times under the Empire. 10



## BENGALI (CLASSICAL)—PASS

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## FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*The figures in the margin indicate full marks*

*Write your answers in EITHER সাধু ভাষা OR চলিত ভাষা, avoiding a mixture of the two styles in the same composition*

1. Is there any truth in the following remark on *বিসর্জন* which the poet himself suggests by way of forestalling his critics?— 20

কেহ বলে “ড্রামাটিক                      বলা নাহি যায় ঠিক,  
লিঁরকের বড় বাড়াবাড়ি।”

*Either*, What are the characteristic features of *বিসর্জন* as a drama? Would you regard the final catastrophe of this play as having something of the melodrama in it?

*Or*, Do you consider the dramatic rehandling of the theme of *বিসর্জন* an improvement on the original story written by the author himself? Who is the ‘hero’ of the play, if there is any hero? Give reasons for your answer.

2. *Either*, Discuss: ‘The character of মদন ঘোষ in *প্রফুল্ল* is no doubt intended as a comic relief to the grim tragedy of the play, but it really introduces an absolutely opposite and irrational kind of humour and foolery, which are hardly in keeping with its intense tragic passion.’ 20

*Or*, Give an estimate of *প্রফুল্ল* as a tragedy. In what does its tragic appeal chiefly consist? Consider its grouping of incident and character from this point of view. Is it just to call its characterization ‘morbid’ or ‘unnatural’?

3. Explain fully with reference to the context any five of the following passages and elucidate in each case their dramatic propriety:— 35

(a) আমার ঘাড়ের ভূতটা এখন তফাতে দাঁড়িয়ে আছে; যদি শীগ্গির না ঘাড়ে চাপে, তা হ’লে পারবো, আর ঘাড়ে চাপলে কি করবো!

(b) মনে কছোঁ মাতলামি করছি? না মনের হুংথে, বলতে বলতে আগুন জ্বলে উঠে; জল দিই।

(c) প্রাণের জন্ত, তুচ্ছ প্রাণ যেতাই বা! তুমি কাঞ্চন ফেলে কাচে গেরো দিয়েছ, মান খুইয়ে প্রাণের দরদ করেছ।

- (d) শুনেছি নারীর রোষ পুরুষের কাছে  
 শুধু শোভা আভাষয়, তাপ নাই তাহে  
 হীরকের দীপ্তি সম !
- (e) নক্ষত্র পড়িলে খসি  
 তার চেয়ে শ্রেষ্ঠতর মাটির প্রদীপ !.....  
 দীপ প্রতিদিন নেভে, প্রতিদিন জ্বলে,  
 বারেক নিভিলে তারা চির অন্ধকার !  
 আমি সেই চিরদীপ্তিহীন !
- (f) যে তরঙ্গ তীরে নিয়ে আসে, সেই ফিরে  
 অকুলের মাঝখানে টেনে নিয়ে যায় !  
 সত্য নহে, সত্য নহে, সত্য নহে ; সব  
 মিথ্যা, মিথ্যা, মিথ্যা !
- (g) সত্য কোথা আছে, কেহ  
 নাই জানে তারে, কেহ নাই পায় তারে !  
 সেই সত্য কোটি মিথ্যারূপে চারিদিকে  
 ফাটিয়া পড়েছে !

4. Discuss the rhetorical figures in passages (e), (f) and (g) in 10  
 Question 3.

5. (a) Either, Mention and illustrate the different types of *samāsas* in 15  
 Bengali, by quoting examples with non-Sam-kritic words.

Or, Write a note on the formation of the Passive in Bengali.

(b) What are the different tenses in Bengali? Illustrate your answer  
 by examples.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*The figures in the margin indicate full marks*

*Write your answers in Bengali; you can use EITHER সাধু ভাষা OR চলিত ভাষা  
 but not a mixture of the two*

1. Either, Write a short commentary in Bengali on the Vaishnava 10  
 conception of love as depicted in Rudha's Purbarag.

Or, Explain briefly the position of Chandidas in Vaishnava 10  
 literature.

2. Either, Write a short note on Bharat Chandra's style. 10

Or, Give in your own words Bharat Chandra's account of Vyasa's 10  
 discrimination between the gods Vishnu and Siva.

3. Either, Describe in your words the colonization of the new City of 10  
 Gujarat by Kalketu.

Or, Give one or two anecdotes of Kalketu's physical strength and 10  
 personal bravery.

4. Explain the following passages :—

(a) কিয়ে মাহুষ পশু পাখী কিয়ে জনমিয়ে  
অথবা কীট পতঙ্গ ।  
করম বিপাকে গতাগতি পুন পুন  
মতি রহ তুয়া পরসঙ্গ ॥

(b)

*Eüther,*

কাল কুশুম করে পরশ না করি ডরে  
এ বড় মনের মনোব্যথা ।  
ষেখানে সেখানে যাই সকল লোকের ঠাঞি  
কানাকানি শুনি এই কথা ॥

*Or,*

চৌদিশে অধির পবন ভরু দোল ।  
জগভরি শীকর-নিকর হিলোল ॥  
চলইতে গোরী নগর-পুরবাট ।  
মন্দিরে মন্দিরে লাগল কপাট ॥

(c)

*Erther,*

বড়ার বহুয়ারী তুমি বড় লোকের ঝিএ ।  
বুঝিয়া তোমার ভাব লাভ আমার কিএ ॥  
শতক রাজার ধন আভরণ অঙ্গে ।  
ভয়হীন হৈয়া-ভ্রম কেহ নাহি সঙ্গে ॥

*Or,*

সখি সঙ্গে জুস্তি চণ্ডী করিয়ে সকল ।  
সেই ক্ষণে হরিল বীরের বাহুবল ॥  
চতুরঙ্গ দলেতে কোটাল বীরে বেড়ে ।  
শহিত্তের ঠেলাঠেলো বীর ভূমে পড়ে ॥  
গজের শিকল দিয়া বান্ধে মোহাবীর ।  
হাতে হাতে বাগা দিলা গলাতে জিজির ॥

(d)

*Erther,*

জটাজুট মুকুট দেখিলা ফণী মণি ।  
বাঘছাল দিব্য বস্ত্র দিব্য পৈতা ফণী ॥  
ছাই দিব্য চন্দন বদন কোটা চাঁদ ।  
মুগ্ধ হৈল সৰ্ব্বজন দেখিয়া স্খাঁদ ॥

*Or,*

চক্ষে জিনি মৃগ ভালে মৃগমদবিম্ব ।  
মৃগ কোলে করিয়া কলঙ্কী হৈল ইন্দু ॥

5. Give a critical estimate of Michael's ব্রজঙ্গনা poems with special 12  
reference to the Vaishnava poetry which inspired them.

6. Develop the idea contained in Rabindranath's poem পরশ পাথর or 10  
অপমান.

7. Explain fully with reference to the context :— 18

(a)

*Either,*

নিজে যে দুঃখিনী পর দুঃখ বুঝে সেই রে,  
কহিলু তোমারে ;

আজিও পাখীর মন, বুঝি আমি বিলক্ষণ,  
আমিও বন্দী লো আজি ব্রজ-কারাগারে ।  
সারিকা অধীর ভাবি কুসুম-কানন,  
রাধিকা অধীর ভাবি রাধা-বিনোদন ॥

*Or,*

এই যে কত মুকুতাফল, এ ফুলের দলে,—  
লো সখি, এ মোর আঁখিজল, শিশিরের চলে ।  
লয়ে কৃষ্ণ চূড়ামণি, কাঁদিলু আমি, স্বজনি,  
বসি একাকিনী,  
তিতিলু নয়ন জলে, এই জল সেই দলে,  
গলে' পড়ে' শোভিতেছে, দেখ লো কামিনি ।

(b) মুহূর্ত্ত তুলিয়া শির একত্র দাঁড়াও দেখি সবে ;  
যার ভয়ে তুমি ভীত, সে অস্ত্রায় ভীকু তোমা চেয়ে,  
যখনি জাগিবে তুমি তখনি সে পলাইবে ধৈর্যে ।

(c)

*Either,*

একদিন এ ভারতে বনে বনে হোঁমাগ্নি-আহুতি  
ভাষাহারা মহাবার্ত্তা প্রকাশিতে করেছে আকৃতি,  
সেই বহি-বাণী আজি অচল প্রস্তুত-শিখা রূপে  
শব্দে শব্দে কোন্ মন্ত্র উচ্ছসিছে যের ধুমতুপে ।

*Or,*

হে সম্রাট, তাই তব শঙ্কিত হৃদয়  
চেয়েছিল করিবারে সময়ের হৃদয় হরণ  
সৌন্দর্য্যে ভুলায়ে ।  
কণ্ঠে তা'র কী মালা ছুলায়ে  
করিলে বরণ  
রূপহীন মরণেরে মৃত্যুহীন অপরূপ সাজে ?

8. Give your own estimate of the lyrical tendencies of modern Bengali 10  
poetry and how far Rabindranath Tagore has influenced the same.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Write your answers in Bengali, in EITHER সাধু ভাষা OR চলিত ভাষা,*

*but you must avoid a mixture of the two styles*

1. Translate into Bengali one of the following passages :—

20

(a) Though from day to day religion occupies little of the peasant's time and attention, its effect in moulding his ambitions and ideal is considerable. Life is conceived as a preparation for the life to come, which is everlasting, and ultimately all that is required is sufficient strength and leisure to prepare for it. For that there must, of course, be ample sustenance, but more than this is a hindrance rather than a help. All therefore that the peasant would ask for when he prays is a sufficiency of flour, pulse, ghee and salt, good clothes for the body, and shoes for the feet, a bed with pillow, mattress and quilt; a cow or buffalo in milk, a mare to ride, a good wife, and sons; and if to these is added freedom from debt, he will have attained the ideal conditions for the realization of Self, the *summum bonum* of both Sikh and Hindu. Less than this will not give his mind that fulness of peace which complete devotion to religion demands; and more may lead him away from the path of self-fulfilment. But the times are changing, and a more acquisitive spirit is in the air, roused by the sight of wealth, and it may be doubted whether ten or twenty years hence the old ideal will find general acceptance. Yet if a few things were added to their simple catalogue of needs—for example, a more varied diet, clean surroundings, health, and a little real education for both man and woman—the peasant would have a philosophy of life which would be at least better than that of the business kite, whose appetite for wealth is insatiable.

(b) Benares is thus an informal university. And like other universities of the Middle Ages, it has always supported its scholars and students by a vast network of institutions of mutual aid. It is no disgrace there for a boy to beg his bread, when love of learning has brought him a thousand miles on foot. These are the scholars for whom our schools and colleges were founded. The wives of the citizens are expected to contribute to the maintenance of such. And it is in Benares only food is wanted. In the dark hours of one winter morning, as I made my way through the Bengali tollah to the bathing ghāts. I could hear in the distance the sound of Sanskrit chanting. And soon I came up to a student who had slept all night on the stone verandah of some well-to-do house, screened from the bitterest pinch of cold by carefully-drawn walls of common sacking, and now had risen before five to read by the light of a hurricane lamp and commit to memory his task for the day. Further on another studied, with no such luxuries as canvas walls and paraffin lamp. He had slept all night under his single blanket on the open stone, and the tiny Indian lamp was the light by which he was reading now. Here is love of learning with labour and poverty. But that it is the duty of the city to provide food for her scholars all are agreed. There are spontaneous benefactions of rich nobles and merchants, of kings and queens, and of pious widows: there are the *chattras*, where a given number of persons receive a meal daily. Is not Benares *Annajurna*—the mother full of food—to these sons of hers?

2. Either, সমস্ত কাশ্মীরী কাব্য একটি চিত্রশালা। Discuss the above remark in the light of your own reading 14

Or, Give a description either of a forest, or of the City of the Gandharvas in the manner of the *Kādambari*.

3. *Either*, 'Pyari Chand Mitra is a clever observer of men and manners. He is keenly alive to the life around him, with its humours and oddities, and with both its beauty and squalor, its joys and sorrows; and he describes things with evident relish and with a rare fidelity to truth. The very language he puts in the mouths of his types is characteristic, and his slang makes them living.' How far do you agree with the above statement? Make clear your views, with references to the *Alâler Gharer Dulâl*. 14

Or, Give a picture of Calcutta as described in the *Alâler Gharer Dulâl*.

4. Write notes on eight of the following words and expressions:— 9

এগারঞ্চি; মখন; তেলে-বেগুনে জ্বলে ওঠা; বোকাটকি; "অপরংবা কিং ভবিষ্যতি"; রাজবোটক; খুরে দণ্ডবং; দাসৌ; কোজ্জাব; তেরিয়া; ভণুল; রেও ভাট; তপ্তিরাম; বদনা ও চেরাগের কেজিয়া; বাওয়াজিকি বাওয়াজি; তরকারিকে তরকারি; চিতেন কেটে বাহবা লওয়া; "প্রহারেণ ধনঞ্জয়ঃ"; উহ্নোওয়ালা; টেপাগোজা; নড়েভোলা; টয়েবাধা; বালতিপোতা; আগুল; সুরত জেলেখার মফিক; "পৈয়িস্, পৈয়িস্"; স্বাধীনবাদ; ছচোকোব্রত; ওয়ারিণ; ছকড়া ত্যক্ত হওয়া।

5. *Either*, 'In the *Kapâla-Kuṇḍalâ* Bankim Chandra has reached the culmination of his art as a master of romance. This novel is artistically the finest of his creations, and with its underlying sense of the mysterious in the character of the heroine, and the depth of the hero's love for her, as well as in the tragic finale, it is a unique master-piece.' Comment on the above statement, and give your own estimate of the work. 16

Or, Write a sketch of the character of ERINA *Kapâla-Kuṇḍalâ* on *Moti Bibi*.

6. Explain clearly two of the following:— 14

(a) ধর্ম যে সৌন্দর্য্যকে ধারণ করিয়া রাখে তাহাই ধ্রুব, এবং প্রেমের শাস্ত সংযত কল্যাণ-রূপই শ্রেষ্ঠ রূপ; বন্ধনেই যথার্থ শ্রী এবং উচ্ছলিতায় সৌন্দর্য্যের আশু বিকৃতি।

(b) মুক প্রকৃতিকে কোন নাটকের ভিতরে যে এমন প্রধান—এমন অত্যাবশ্যক স্থান দেওয়া যাইতে পারে, তাহা বোধ করি সংস্কৃত-সাহিত্য ছাড়া আর কোথাও দেখা নাই।

(c) যে ঋষিকবি ক্রৌঞ্চবিরহিণীর বৈধবাহুঃখ মুহূর্ত্তের জ্ঞান সহ করিতে পারেন নাই, তিনিও একবার চাহিয়া দেখিলেন না।

(d) যুরোপ খুব করিয়া হইতে চায়, আমরা একেবারেই না হইতে চাই।

7. *Either*, What impression does Sarat Chandra Chatterji's *Dattâ* convey to you about the author's method in depicting his characters? What success has he attained in this direction in *Dattâ*? 14

Or, Give a sketch of the character of Râshihârî.

## HISTORY HONOURS

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## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Candidates are permitted to answer six questions only, of which not more  
than two must be taken from any of the groups A, B, C, D*

*The questions are of equal value*

## A

1. Illustrate *one* of the following subjects from the accompanying sketch-map, and add explanatory notes wherever necessary :—

(a) The growth of the Ottoman Empire in Europe from 1494 to the death of Solyman the Magnificent.

(b) The territorial acquisitions by France during the reign of Louis XIV, and their value.

(c) The conquests of Napoleon I and their significance.

(d) The unification of Italy.

2. Compare the relative advantages enjoyed by France and Spain in the struggle for Italy in the earlier part of the sixteenth century.

3. 'The reformation was the outcome of two forces, independent in origin, and never wholly in agreement; the Renaissance, and the desire for reform in dogma and practice.' Develop.

4. Were the causes of the revolt of the Netherlands mainly religious, political, or economic? How did the revolt affect European Politics?

5. Discuss the causes of the rise and the decline of the Huguenots as a political factor in France.

## B

6. Discuss any two of the following :—(a) Loyola, (b) Cervantes, (c) Machiavelli, (d) Catherine de Medici.

7. 'As a benefactor of the French people, Richelieu is infinitely below Sully and Colbert as he is above them in statesmanship.' Develop.

8. Account for the atrocities committed during the Thirty Years' War.

9. 'The success of Louis XIV's policy of territorial aggression was due to the consistent internal policy of the two cardinal Ministers and the political condition of the chief European states.' Explain.

10. Account for the early success of the Turks in Europe. Why could not they establish a permanent empire in Europe?

## C

11. Give an account of Sweden's struggle for supremacy in the Baltic. Why did she fail in this struggle?

12. 'As a strategist Marlborough can be compared not with Frederic the Great or Napoleon but with Wellington and Turenne and he need not fear the result.' Do you agree?

13. 'Never perhaps did any war, after so many great events and so large a loss of blood and treasure end in replacing the nations engaged in it so nearly in the same situation as they held at first. Is this a correct description of the Austrian War of Succession?

14. Describe and criticize the constitutional reforms of the constituent assembly.

15. Metternich described Canning as 'the man whom Providence hurled upon Europe like a malignant meteor.' Do you agree?

16. Estimate the importance of the part played by (a) Robespierre, (b) Danton in the cause of the French revolution.

## D

17. Why did Louis Philippe fail in his domestic policy?

18. 'The year 1848 is an *annus mirabilis* in European history.' Illustrate.

19. 'The History of France under Napoleon III as under Napoleon I is the history of every country in Europe except France.' Do you agree?

20. Discuss the services rendered by (a) Cavour, (b) Garibaldi, (c) Mazzini to the Italian cause.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Not more than FIVE questions are to be attempted*

*All questions are of equal value*

1. Criticize the ministries of the period 1763-68 in dealing with the problems that the British nation was then called upon to solve.



2. Discuss the economic causes that influenced the revolt of the American colonies.
3. What were the existing political conditions in which Fox brought forward this India Bills, and for what purpose were the Bills designed?
4. Describe (a) the object, (b) the effect, of the Place Act (25 Geo. III) and Fox's Liabilities Act (32 Geo. III).
5. Trace the steps which led to the Treaty of Versailles (1786).
6. Give an account of the steps taken during the reign of George III to abolish slavery.
7. Give a brief survey of the extent of the British Empire in 1815, enumerating those portions founded by colonial adventure.
8. 'The Industrial Revolution was the logical outcome of the discoveries of Columbus and Vasco da Gama.' Explain this comment.
9. Give a brief but comprehensive statement of the case for Reform, and account for the opposition to it.
10. In what sense may the year 1815 be said to close an epoch?

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Attempt only SIX questions, two being taken from each group*

*All questions carry equal marks*

#### GROUP A

1. 'Unquestionably the most copious and important source of early Indian history is the epigraphic.' Discuss.
2. What light do the Arthashastra and the account of Megasthenes throw on the general system of administration in ancient India?
3. Discuss the different views about the cause and time of Aśoka's conversion to Buddhism. Write a critical note on his effort to spread Buddhism in and outside India.
4. Describe the successive stages in the growth of the Gupta empire, and indicate the importance of the Gupta period in the History of Indian culture and civilization.
5. What do you consider to be the outstanding achievements of the Cholas? State reasons for your answer.

#### GROUP B

6. Write a critical note on the internal administration of Sultan Firoz Tughlaq.
7. What do you know of the origin of the kingdom of Vijayanagara? Give some account of the capital city, and describe in detail the career of one of its important kings.
8. *Either*, Write a critical note on the religious principles and intellectual pursuits of Akbar.  
*Or*, Write a critical note on the development of art and literature during the reign of Akbar.
9. Sketch in broad outline the political history of the Marhattas during the fifty years following the death of Aurangzeb.

## GROUP C

10. Indicate the nature and extent of the authority vested in the Supreme Court by the Regulating Act. Explain the defects of the system in the light of Ilbert's criticism of the Act. How far were these defects removed by the Amending Act of 1781 ?

11. Trace the successive changes in the power, functions and constitution of the Legislative Councils in India up to the close of the nineteenth century.

12. Explain the important changes in the policy of the Government of India towards the Native States since 1858.

13. How far do you accept the view that Hastings was 'the greatest of Anglo-Indian rulers' ?

14. Examine the policy and form an estimate of the achievements of Wellesley. Why was his policy reversed by the home authorities ?

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer FOUR questions only*

*The questions are of equal value*

1. 'That empire we acquired by no violent means, but because you were unwilling to prosecute to its conclusion the war against the barbarian, and because the allies attached themselves to us and spontaneously asked us to assume the command.'

*(Speech of the Athenian envoys at Sparta.)*

'What you hold us, to speak somewhat plainly, a tyranny; to take it perhaps was wrong, but to let it go is unsafe.' (PERICLES.)

Examine these contrasted views of the origin and character of Athenian imperialism.

2. 'As a city we [Athenians] are the School of Hellas.' Explore the truth in this claim.

3. What was the attitude of the oligarchical and democratic parties at Athens towards Sparta during the period 479—429 B.C.? Illustrate your answer by references to the leading public figures of the time.

4. Examine the value of Thucydides' estimate of the character and career of Cleon.

5. 'Restless, unfixt in Principles and Place,  
In Power unpleased, impatient of Disgrace.'  
Do these lines apply to Alcibiades ?

6. Describe the composition of the population of the Greek city-states in the fifth century B.C.

7. Write brief notes on any five of the following :—battle of the Eurymedon, the Areopagus, the *Fumenides* of Aeschylus, battle of Oenophyta, cleruchis, the *Clouds* of Aristophanes, Callicratids, and the Graphe Paranomon.

8. The Athenian constitution 'was nominally a democracy', but really a 'government by the first citizen.' Critically examine this view of the Athenian constitution in the time of Pericles.

## FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer Questions 1 and any FOUR others*

*All questions carry equal marks*

1. *Either, Draw a map indicating accurately the extent of the Roman Empire in 146 B.C.*

*Or, Draw a plan of Rome at the time of the Second Punic War.*

*In either case add necessary explanations.*

2. *To what (a) qualities of national character, (b) economic, political, and geographical advantages, do you ascribe Rome's triumph over Carthage ?*

3. *What changes in internal organization were necessitated by Rome's expansion beyond Italy ?*

4. *'The First Punic War was a struggle in which both Rome and Carthage were serving an apprenticeship in a warfare the conditions of which were unfamiliar to both.'* Elaborate this statement.

5. *Write brief notes on five only of the following :—the battle of the Metaurus, the organization of the legion, Hannibal's route from Spain into Italy, the Roman navy, Cisalpine Gaul, the roads of Italy, Massinissa, slavery at Rome.*

6. *Estimate the fitness of Hannibal for the mission to which he devoted his life, illustrating your estimate by reference to his work in Spain, Italy, and Africa.*

7. *Explain carefully the steps by which Rome became involved in the affairs of Greece.*

8. *Give a brief account of Rome's military system at the time of the Second Punic War.*

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SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer Question 9 and any FOUR of the rest*

*All questions are of equal value*

1. *'He [Charlemagne] possessed in everything that grandeur of conception which distinguishes extraordinary minds. . . The great qualities of Charlemagne were, indeed, alloyed by the vices of a barbarian and a conqueror' (HALLAM).*

*Justify the above opinion by a survey of Charlemagne's career and character.*

2. *Give a sketch of the Anglo-Saxon constitution in the ninth and tenth centuries. Are we justified in likening the Witenagemot to the modern Parliament ? Wherein lay the inherent weakness of the Anglo-Saxon State ?*

3. *'The marked development of European civilization during the two centuries from 1100 to 1300 A.D. was assigned to the influence of the crusading movement' (Camb. Med. Hist.).*

*In what different directions have the Crusades been alleged to have influenced the East and the West, and with what reason ?*

4. 'Hildebrand [Gregory VII] saw the Papacy in its degradation and was to participate in every stage of its recovery.... He was the outstanding figure whose qualifications for the papal throne none could contest' (BROOKS).

Describe his reforms and narrate the history of his contest with the Empire and the growth of his power.

5. How do you account for the victory of the English in the battles of the Hundred Years' War? Describe the condition of France during the closing stages of this war. What causes contributed to the ultimate failure of the English?

6. What was the origin of the Guelph and Ghibelline parties, and how did they influence the history of Italy and of Germany?

7. Trace the steps by which the union of Spain under one crown was effected, and describe in outline the constitution of Castile.

8. How did the Turks establish themselves in Europe? Trace the history of the last days of the Eastern Roman empire, and explain the causes of its fall.

9. Write a short essay on Chivalry: its origin—its ceremonies—its influence on social manners and on national feelings—its connexion with religion—the view that gunpowder killed chivalry.

### HISTORY—PASS

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### FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer only six questions, any THREE to be taken  
from each group*

*All questions are of equal value*

### GROUP A

1. How far was the Reformation a result of the Renaissance?
2. What were the chief aims of Philip II of Spain? Do you consider him to be a great ruler?
3. Account for the supremacy of France in European politics in the seventeenth century.

4. Draw a sketch-map to illustrate the growth of Prussia, from the Great Elector to Frederick the Great, and give general reasons for this expansion.

5. Sketch the career of Joseph II of Austria. How far was he a benevolent despot?

6. Mention the wars between England and France from 1688 to 1813, and explain the results of the hostility between the two countries in this period.

7. Write notes on any two of the following :—

- (a) The policy of Charles V.
- (b) Mazarin.
- (c) Solymán the Magnificent.
- (d) The Diplomatic Revolution of 1856.

### GROUP B

8. What are the main ideas of the French Revolution, and how far did they affect Europe in the nineteenth century?

9. What were the reasons for the failure of the European coalitions to crush the French Revolution?

10. Draw a map of the empire of Napoleon I at its zenith, and account for its downfall.

11. What is meant by the 'Concert of Europe'? Trace its activities after the fall of Napoleon I.

12. Give a short account of the relations between Russia and Turkey from 1815 to 1878.

13. Narrate the story of Italian unity.

14. Write notes on any two of the following :—

- (a) Robespierre
- (b) Canning's foreign policy.
- (c) The causes of the failure of the Holy Alliance.
- (d) The causes of the success of the Greeks in securing their independence.

— — —

### SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only FIVE questions are to be answered*

*The questions are of equal value*

1. 'George III was neither profligate nor great' Comment upon this statement.

2. Write a short note on the House of Commons at the time of George III. What reforms, if any, were attempted or carried out during his reign?

3. Discuss the policy of George III towards America.

4. 'From the hour of Chatham's death England entered on a conflict with enemies whose circle widened till she stood single-handed against the world.' Discuss this statement.

5. Write a short life of William Pitt.

6. Write a short note on Trade and Industry at the time of George III.

7. Estimate the influence of Adam Smith's *Wealth of Nations* on English thought.
  8. Discuss the social and economic conditions under George III.
  9. Relate the story of the rupture between Burke and Fox.
  10. Write a short note on the Tractarian Movement.
  11. Discuss Fitzwilliam as Viceroy.
  12. 'The period which elapsed between the resignation of Pitt and the battle of Waterloo was hardly less eventful in the history of British civilization than in the history of British empire.' Discuss this statement.
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### THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Six questions to be attempted. From each section at least  
one question should be answered*

*The questions are of equal value*

#### A

1. Describe the indigenous sources of the history of pre-Muhammadan India, explaining the absence of Hindu historical literature.
2. Institute a brief comparison between Asoka and Akbar.
3. Give a short account of Kanishka's conquests and extent of dominions. Why is his reign celebrated in the history of Buddhism?
4. Briefly narrate the history of the Chalukyas and the Pratiharas.

#### B

5. What do you know of Sher Shah and his government?
  6. Narrate briefly the origin, rise, and fall of the Bahmani kingdom.
  7. Describe the policy adopted by the Mughal Government towards the Hindu Princes in the time of Akbar and after.
  8. Sketch the life and estimate the work of Ranjit Singh.
  9. Account for the failure of the French to establish an empire in India.
  10. Give a brief sketch of the revenue administration in India under the East India Company.
  11. Write a critical note on the policy and character of Warren Hastings.
  12. Compare the administration of Lord William Bentinck with that of Lord Dalhousie.
-

1. Explain clearly under what conditions a monopolistic producer is likely to charge consumers less than what would be charged by competing producers.
2. 'The central fact of the problem of value under competitive conditions is that scarcely any important result is true in regard to both short periods and long.' Illustrate this statement.
3. What are the chief economic advantages and disadvantages of speculation?
4. Give an account of the banking system of the U.S.A.
5. 'There can be little question that periods of rising prices are in fact, periods of higher interest rates.' How would you explain this fact?
6. What is meant by unfavourable rate of exchange? Analyse the principal causes which make the exchanges move against a country.
7. What is the influence of standard of life on the rate of wages?
8. 'If business profits are in some respects analogous to rent, they are in other respects closely related to interest.' Elucidate this statement.
9. Consider the view that a general rise in wages has a tendency to check a country's exports to other manufacturing countries where wages are stationary.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Attempt any six questions*

*All questions are of equal value*

1. 'While not a correct theory in its pure form, the Social Contract theory contains elements of truth of fundamental value.' Discuss.
2. Briefly indicate the boundaries of the sphere of *Law* and the sphere of *Morality*. Is there any relation between them?
3. Indicate the chief features of a constitutional government. Can there be a bureaucracy under a constitutional government?
4. Elucidate the organic theory of the State, and bring out the elements of truths and errors of this theory.
5. Discuss the question of the location of sovereignty in the American Federal republic.
6. The judiciary of the United States has a competence far beyond that of the judiciary of the United Kingdom. Illustrate.
7. Give the outlines of the Federal scheme for India discussed at the Round Table Conference
8. Between 1873 and 1926 (a period of 53 years) France has been governed by 75 ministries; whereas during the same period England had only 12 ministries. State the reason.
9. Contrast the powers and functions of the Prime Minister of England and the President of the United States.
10. How far has the constitution of America influenced the new Republican constitution of Germany?

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer six questions only*

*All questions are of equal value*

1. Discuss the effect of industry on the distribution of the population. What factors have contributed to the modern industrial development along the river Hooghly?
2. 'The peculiar feature of the Indian village community was that the majority of the artisans were servants of the village.' How far is that true now?
3. 'Jute is Bengal's monopoly.' What advantage does Bengal derive from this? Mention any possible rivals of jute, and show how they are at a disadvantage.
4. 'In the end it is the character of the cultivator that counts.' Discuss briefly the competence of the Indian cultivator.
5. In what respects does the Gold Bullion standard differ from the pre-war exchange standard?



6. State briefly how the Government of India and the Government Bengal get their revenues, and on what they spend them.
7. What are the chief recommendations of either the Lunlithgow Commission on Agriculture, or the Whitley Commission on Labour, that especially concern this province?
8. 'It has often been said that the early development and expansion of railways in India hindered the growth of industries.' Discuss this statement.
9. To what extent is the organization of industry in Bengal determined by caste considerations.
10. 'The monsoon has its effect on the character and outlook of the population.' Develop this statement.

#### FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. Prove that the total utility from all articles consumed is at its maximum when the marginal utility from each article is about the same.
  2. Analyse profit, and describe how each item constituting it is determined.
  3. Explain the conditions that must exist before there can be trade between two countries. Illustrate your answer with hypothetical examples.
  4. Discuss the effect of trade unionism on wages.
  5. Give the arguments in favour of imposing a protective tariff, and discuss the conditions which you would like to see fulfilled before granting such protection.
  6. 'The subjects of every State ought to contribute toward the support of its government in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of the State.'
- Critically examine this canon of taxation formulated by Adam Smith, and discuss how far the individual's income is a correct test of his ability to pay taxes.
7. How would you measure the burden of public debts? Discuss the reasons if any, for the view that an external debt is more burdensome to a community than an internal debt.
  8. How far is it true to say that premium on gold measures the extent of depreciation of paper money resulting from over-issue?
  9. How is a disturbance of equilibrium between a country's debits and credits corrected? Consider separately the case of trade between countries which have (a) gold currency, and (b) inconvertible paper currency.

#### FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer six questions only*

*The questions are of equal value*

1. Examine Aristotle's definition of the state. Compare it with any typical modern definition as regards both its content and the method of arriving at it.

2. Give a short sketch of the ideal states drawn by Plato in the *Republic* and the *Laws*, and evaluate Aristotle's criticism of them.

3. Give Aristotle's classification of the forms of monarchy, and of the types of tyranny. Under what circumstances does he consider absolute monarchy just?

4. What, in Aristotle's view, constitutes an executive office, and how do his methods of appointment compare with these in modern states, such as Britain and the United States?

5. Compare the general principles enunciated by Aristotle, with regard to the constitution of an executive, with those of John Stuart Mill.

6. Examine the following statements of John Stuart Mill—'A good despotism is an altogether false ideal. ... Evil for evil, a good despotism in a country at all advanced in civilization, is more noxious than a bad one. ... The despotism of Augustus prepared the Romans for Tiberius.'

7. Evaluate John Stuart Mill's views on the utility of the federal form of government.

8. Examine, in the light of modern experience, especially in India, John Stuart Mill's views on indirect election.

9. Estimate the value of Aristotle's scheme of education for modern political life.

### SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

Write an essay on any one of the following subjects :—

- (a) Economic progress and social welfare.
- (b) The foreign trade of India.
- (c) The jute industry in Bengal.
- (d) The future constitution of India.

### ECONOMICS—PASS

Examiners—	{	MR. AKSHAYKUMAR SARKAR, M.A.
		„ SATISCHANDRA CHAKRABARTI, M.A.
		„ PRASADCHANDRA BANERJEE, B.A., B.Sc.
		„ DURGAGATI CHATTERAJ, M.A.
		„ ROHINIMOHAN CHAUDHURI, M.A.
		„ B. RAMCHANDRA RAU, M.A.
		„ BIJAYKUMAR SARKAR, A.B.
		„ BINAYKUMAR CHOUDHURI, M.A.
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		„ UMAKANTA GOSWAMI, M.A.
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		„ DHIRENDRANATH SENGUPTA, M.A.
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		MR. PANCHANAN SINHA, M.A., Ph.D.
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		„ HARISADHAN CHATTERJEE, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Not more than six questions to be answered*

*The questions are of equal value*

1. 'Political Economy is, on the one side, a study of wealth, and on the other, and more important, side a part of the study of man.' Discuss.
2. Water is more *useful* than gold; yet gold has a greater *market value* than water. How do you explain this paradox?
3. 'Broadly speaking, while the part which Nature plays in production conforms to the Law of Diminishing Return, the part which man plays conforms to the Law of Increasing Return.' Discuss.
4. Is an increasing population always beneficial to a country?
5. Gas and coke are joint products. A duty of 10 per cent. is imposed on gas. How will it affect the price of coke?
6. 'In the short run Labour and Capital are competitive; in the long run they are complementary.' Discuss this statement.
7. Explain the processes by which banks create credit. What is the effect of credit on prices?
8. 'Our imports are paid for by our exports.' Elucidate.
9. How is the value of money determined (a) internally, and (b) internationally?

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. Critically examine the Social Contract theory of the origin of the State.
2. Discuss the nature and sources of law.
3. What are the distinguishing marks of a federal union? How does it differ from (a) a federation, and (b) a unitary form of government?
4. What, in your opinion, is the proper sphere of the State? Do you justify what is popularly known in India as the Sarda Act? Give reasons for your answer.
5. Discuss the purpose and provisions of the Parliament Act, 1911.
6. 'The (British) Cabinet is a unit - a unit as regards the Sovereign, and a unit as regards the Legislature.' Explain this statement, and briefly discuss in this connexion the position of the Cabinet in the English Constitution.
7. What is meant by the constitution of a country?  
State how constitutional changes can be effected in England, France, and the United States of America.
8. 'The Indian legislatures are non-sovereign law-making bodies.' Examine this statement.

9. Discuss the position and powers of the Governor-General of India with special reference to his relation to his Executive Council.

10. The strict separation of powers is not only impracticable, as a working principle of government, but it is not to be desired in practice. Discuss this statement.

### THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. Examine the possibilities of the handloom cotton industry in Bengal.
2. Discuss the arguments for and against the permanent settlement of land revenue in Bengal.
3. Examine the scope of co-operation in the field of Indian agriculture.
4. Discuss briefly the existing system of provincial finance in India.
5. Examine the composition and functions of the Indian Paper Currency Reserve.
6. Distinguish between direct and indirect taxes, and examine their merits and demerits.
7. Describe the various types of Banks that exist in India. Examine also the relation of the Imperial Bank of India to State.
8. Examine the progress of the Trade Union movement in India. Is the movement running on right lines?
9. Describe the main features of the Gold Exchange Standard as it operated in pre-war days.
10. Write notes on any two of the following :—
  - (a) The salt tax.
  - (b) The income tax.
  - (c) Treasury bills.

### PHILOSOPHY—HONOURS

<i>Paper-Settlers— (Pass &amp; Hons.)</i>	{	DR. SUSILKUMAR MAITRA, M.A., PH.D.
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		„ SATISCHANDRA CHATTERJEE, M.A.
		DR. SAROJKUMAR DAS, PH.D.
		PROF. HIRALAL HALDAR, M.A., PH.D.
		REV. J. N. RAWSON, B.Sc., B.D.
<i>Examiners—</i>	{	RAI BAHADUR HEMCHANDRA DE, M.A.
		DR. SURENDRANATH DASGUPTA, M.A., PH.D.
		PROF. HIRALAL HALDAR, M.A. PH.D.
		„ W. S. URQUHART M.A., D.LITT., D.L., D.D.
		SIR. S. RADHAKRISHNAN, M.A., D.LITT.
		DR. MAHENDRANATH SARKAR, M.A., PH.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Define psychology as a natural science, and determine its place in the scheme of sciences.
  2. What are the elementary mental processes, and how are they related to one another? Do you consider any of them to be more fundamental than the rest?
  3. Briefly describe the different parts of the nervous system, and explain their functions in relation to mental processes.
  4. What is meant by the 'conscious,' 'sub-conscious,' and 'unconscious'? Explain and illustrate how conscious processes depend on the sub-conscious and the unconscious.
  5. What is the distinction between cutaneous and kinaesthetic sensations? What are their different kinds and neural bases?
  6. Explain and illustrate the truth of the statement: 'The formation of the elements of the process of knowledge and the inauguration of the control over movements in accordance with the mandates of experience—these are the two great functions of perception.'
  7. Analyse the feelings, and discuss the theories of pleasure and pain.
  8. Analyse any fully developed voluntary action, and show how the results of your analysis bear on the question of freedom of the will.
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## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Is a man who breaks away from the customs of his society to be morally condemned? Discuss the question with special reference to the problem of the relation between morality and custom.
2. Explain the notion of progress as applied to morality. Do present conditions in India favour the birth of new moral ideas?
3. Discuss the principal forms of Intuitionist Ethics, remarking upon the distinctive features of each.
4. Should a poor man repay his debt to a rich man? Discuss the question with special reference to the principle of the greatest good of the greatest number.
5. What are the 'rights of man'? How far is a man justified in asserting his rights against the established laws of his country?
6. Are mad actions to be judged as morally bad? Give reasons for your answer.
7. Brutus assassinated Caesar in what he sincerely believed to be the true interests of his country. How would you judge Brutus, and why?

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. 'The distinction between science and philosophy is not a distinction of kind, but only of degree. Where science seeks to think the facts, philosophy seeks to think them out.' Examine the contention, and state the precise nature of the relation of philosophy to Science.

2. Show that 'for us philosophy offers no short cut to truth: it attains its end, as does science, by the hard method of reason, by analysis and synthesis.' Determine in the light of the above the *method* of Philosophy and the character of philosophical knowledge resulting therefrom.

3. Elucidate the nature of Causality as a category of knowledge, distinguishing carefully between the content and the origin of this idea. How far is it true to claim that 'it is only by reference to the psychological birth and history of the notion of causality that we can detect its essence'?

4. Develop the contrast between Mechanism and Life, noting carefully the function of Organization in life. Argue the case for a mechanistic conception of life, and indicate the strength as well as weakness of such a conception.

5. Show how far mental evolution in the animal kingdom as a whole illustrates the principle that 'all development is by "breaks" and yet makes for continuity.' Discuss this question with specific reference to the nature and origin of Reason.

6. What is the Noumenal Self as distinguished from the Empirical Self? Expound the bearing of each on the nature of the Social Self.

7. Discuss fully the position that 'the Absolute cannot be God, because in the end the Absolute is related to nothing, and there cannot be a practical relation between it and the finite will.' What are, in your opinion, the implications of the idea of the Absolute.

8. Attempt a critical estimate of the arguments on behalf of Liberty and Necessity, and substitute that view of the human will which is consistent with Divine Providence.

## FOURTH PAPER

## NATURAL THEOLOGY

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. *Either*, Discuss the suggestion that religion is more akin to Art than to Science, so that it is a representation of reality in terms of quality or value.

*Or*, Show how the two tendencies of thought in Kant's *Critiques of Pure and Practical Reason* have variously operated in the sphere of the Philosophy of Religion.

2. *Either*, Briefly sketch the history of the concept of matter, and show its bearing on the tenability of materialism.

*Or*, Examine the statement: 'Mind and matter are convenient terms but not ultimate realities. Electrons and protons, like the soul, are logical fictions' (BERTRAND RUSSELL).

3. Briefly sketch the history and estimate the value of the argument to a 'first' cause.

4. Is Kant's dollar illustration a sufficient refutation of the ontological argument?

State the argument (or postulate) in a modern way

5. 'Darwin gave us the solution of the problem. How can purposive contrivance be produced by purely mechanical processes, without design? Thus we have got rid of the teleological philosophy of the schools' (HAECKEL).

'One of the greatest services rendered by my father ... is the revival of teleology' (SIR FRANCIS DARWIN).

Comment on the above statements, and give your own view as to the effect of evolutionary biology on the Philosophy of Religion.

6. *Either*, Discuss Kant's conception of the nature of the *summum bonum* and its significance for theistic philosophy.

*Or*, Explain Kant's statement: 'Admitting that the moral law binds every man as a *categorical* (not as a rule of prudence), the righteous man may say, *I will* that there be a God ... I firmly abide by this and will not let it be taken from me.'

Do you consider that Kant, here or elsewhere, gives a satisfactory statement of the moral argument?

7. *Either*, Expound in connexion the two sayings:—'This is the best of all possible worlds' (LEIBNIZ). 'An imperfect world is necessary for the growth and training of moral beings' (SPENCER).

*Or*, Expound Pringle-Pattison's saying that 'Kant's attitude (to the question of value or worth) is that of Browning in *Rabbi ben Ezra*'.

8. Discuss the objection that to attribute personality to God is to be guilty of anthropomorphism

9. What are the main reasons for the belief in human immortality? Discuss the one you consider most convincing.

## FIFTH PAPER

### HISTORY OF PHILOSOPHY

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Briefly outline the attitude of the following philosophers towards Teleology, indicating the reasons that prompted them to take up such an attitude:—Bacon, Descartes, Spinoza, Kant.

2. What proofs were advanced by Descartes to establish the existence of God?

Estimate the importance of the doctrine of the veracity of God in his system.

3. Sketch Spinoza's theory of knowledge, and show its relation to his general philosophical position.

4. How has the word 'substance' been understood by Spinoza, Leibniz, Locke, and Kant?

5. Give a brief outline of Locke's empiricism, and compare it with that of Hume.

6. Institute a critical comparison between the idealism, of Berkeley and the spiritualism of Leibniz.

7. Critically estimate the relative merits of the answers of Reid and Kant to the scepticism of Hume.

8. Expound the treatment of the doctrine of Causality by any *two* of the following thinkers :—Spinoza, Leibniz, Hume, Kant.

9. Give a description of the nature and function of God as in the systems of Leibniz, Berkeley and Kant.

10. What different types of Idealism do you meet with in modern philosophy from Descartes to Kant? Attempt a criticism of any *one* of them.

### SIXTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Answer Question 6 and any TWO of the rest*

- |  |    |
|--|----|
| 1. Explain as fully as you can Berkeley's view that the being of things is their being perceived.  | 25 |
| 2. Give an exposition of Berkeley's conception of the self.  | 25 |
| 3. How far, if at all, is Berkeley's immaterialism a tenable theory?   | 25 |
| 4. Give the substance of Berkeley's argument against abstract ideas. Examine its validity.   | 25 |
| 5. 'We need only open our eyes to see the Sovereign Lord of all things with a more full and clear view than we do any one of our fellow creatures.' How does Berkeley show this? | 25 |
| 6. Write an essay on any <i>one</i> of the following subjects :—   | 50 |
| (a) Thought, Feeling, and Will : their mutual relations.   |    |
| (b) Society and the individual.  |    |
| (c) Matter and mind.   |    |
| (d) The proofs of the existence of God.  |    |
| (e) The basis of religion.   |    |
| (f) Philosophy and life.   |    |



# B.A. and B.Sc. Examinations,

1932

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## MATHEMATICS—HONOURS

Paper-Setters—	{	PROF. GANESH PRASAD, M.A., D.Sc.
		DR. HARIDAS BAGCHI, M.A., Ph.D.
		„ NRIPENDRANATH SEN, D.Sc.
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Examiners—	{	DR. HARIDAS BAGCHI, M.A., Ph.D.
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		MR. BAIKUNTHACHANDRA RAY, M.A.
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		DR. BIBHUTIBHUSHAN DATTA, D.Sc.
		„ INDUBHUSHAN BRAHMACHARI, M.A., Ph.D.

### FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Full marks for any SEVEN questions*

1. (i) Prove that the arithmetic mean of  $n$  positive quantities cannot be less than their geometric mean.

(ii) If  $x, y, z$  be three positive quantities whose sum is unity, show that

$$(1-x)(1-y)(1-z) > 8xyz.$$

(iii) If  $(1-x)(1-y)(1-z) = xyz$ ,

show that the greatest value of either member of the equality is  $\frac{1}{8}$ ,  $x, y, z$  being each positive and less than 1.

2. Explain clearly what is meant by the *convergence* of an infinite series  $\sum u_n$  and establish the ratio test of convergence when the terms are ultimately all positive.

Test the convergence of the infinite series  $\sum u_n$  when

$$(i) u_n = \frac{z^n}{n}; \quad (ii) u_n = \frac{n!}{n^n}; \quad (iii) u_n = \frac{3^n \cdot n!}{n^n}.$$

3. Prove that the odd convergents to a continued fraction are an increasing series of fractions continually approaching the value of the whole continued

fraction while the even convergents form a decreasing series with the same property.

If  $\frac{p_n}{q_n}$  be the  $n$ th convergent to the continued fraction

$$a_1 + \frac{1}{a_2 + \frac{1}{a_1 + \frac{1}{a_2 + \frac{1}{a_1 + \dots}}}}$$

show that  $p_{2n} = q_{2n+1}$ ,  $p_{2n-1} = \frac{a_1}{a_2} q_{2n}$ .

4. Prove the following identities :

(i)  $n^n - (n+1)(n-1)^n + \frac{(n+1)n}{2!}(n-2)^n - \dots$  to  $n$  terms  $= 1$ ,  $n$  being

a positive integer.

(ii)  $p^n + q^n = (p+q)^n - npq(p+q)^{n-2} + \frac{n(n-3)}{2!} p^2 q^2 (p+q)^{n-4} - \frac{n(n-4)(n-5)}{3!} p^3 q^3 (p+q)^{n-6} + \dots$ ,  $n$  being a positive integer, starting from the identity

$$(1 - px)(1 - qx) = \{1 - x(p + q - pqx)\}.$$

5. Sum the following series :

(i)  $\sum n(n+2)(n+4)$  to  $n$  terms ;

(ii)  $\frac{1}{1 \cdot 3} + \frac{2}{1 \cdot 3 \cdot 5} + \dots + \frac{n}{1 \cdot 3 \cdot 5 \dots (2n+1)}$ .

Find the generating function of the series

$$2 + 2x + 8x^2 + 20x^3 + \dots$$

6. (i) If

$$\Delta = \begin{vmatrix} a_1 & b_1 & c_1 \\ a_2 & b_2 & c_2 \\ a_3 & b_3 & c_3 \end{vmatrix}$$

and

$$\Delta' = \begin{vmatrix} A_1 & B_1 & C_1 \\ A_2 & B_2 & C_2 \\ A_3 & B_3 & C_3 \end{vmatrix}$$

where  $A_1, B_1, \&c.$ , are the cofactors of  $a_1, b_1, \&c.$ , of the determinant  $\Delta$ , prove that  $\Delta' = \Delta^2$ .

What is the corresponding relation when  $\Delta$  is constituted of  $n$  rows and columns?

(ii) Put the determinant

$$\begin{vmatrix} 1 & 1 & 1 \\ \alpha & \beta & \gamma \\ \alpha^3 & \beta^3 & \gamma^3 \end{vmatrix}$$

into linear factors.

7. Enunciate and prove Descartes' rule of signs for positive roots of the equation  $f(x)=0$ ,  $f(x)$  being a polynomial.

Discuss the nature of the roots of the following equations :

(i)  $2x^4 + 14x^3 + 5x - 13 = 0$  ;

(ii)  $x^n + 1 = 0$ .

8. Form the equation of squared difference of the cubic

$$a_0x^3 + 3a_1x^2 + 3a_2x + a_3 = 0,$$

and with its help discuss the nature of the roots of the cubic.

If the equation

$$ax^3 + bx^2 + cx + d = 0$$

can be put into the form

$$(x^2 + px + q)^2 = x^4,$$

show that

$$c^3 - 4bcd + 8ad^2 = 0.$$

9. Give any criterion for determining a superior limit of the positive roots of  $f(x)=0$ ,  $f(x)$  being a polynomial.

Show that 4 is a superior limit of the positive roots of the equation

$$x^4 - 2x^3 - 3x^2 - 15x - 3 = 0,$$

and 1 is an inferior limit of the positive roots of

$$18x^4 - 2x^3 + 33x^2 - 4x + 1 = 0.$$

10. Calculate to four decimal places the positive root of the equation

$$x^3 + 2x^2 - 23x - 70 = 0.$$

11. Prove that the sum of similar powers of the roots of  $f(x)=0$ ,  $f(x)$  being a polynomial, is expressible rationally in terms of its coefficients.

Find the sum of the  $m$ th powers of the roots of the equation  $x^n - 1 = 0$ .

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only six questions are to be attempted not more than FOUR from one group*

*All the questions are of equal value*

### GROUP A

1. Find the condition that the general equation of the second degree,

$$ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0,$$

may represent

- (i) a circle,
- (ii) a parabola,
- (iii) two straight lines, real or imaginary.

Assuming that the condition (iii) is satisfied, prove that the equation to the third pair of straight lines passing through the points where the two straight lines meet the axes is

$$ax^2 - 2hxy + \frac{4fg}{c}xy + by^2 + 2gx + 2fy + c = 0.$$

2. If

$$x + y\sqrt{-1} = \tan(u + v\sqrt{-1}),$$

where  $x, y, u$ , and  $v$  are all real, prove that the curves  $u = \text{constant}$  give a family of coaxial circles passing through the points  $(0, \pm 1)$ , and that the curves  $v = \text{constant}$  give a system of circles cutting the first system orthogonally.

From any point on one given circle, tangents are drawn to another given circle. Prove that the locus of the middle point of the chord of contact is a third circle.

3. Prove that the directrix of the parabola

$$\sqrt{ax} + \sqrt{by} = 1$$

is

$$(b+a \cos \omega)x + (a+b \cos \omega)y = \cos \omega,$$

and the length of the latus rectum is

$$4ab \sin^2 \omega / (a^2 + b^2 + 2ab \cos \omega)^{3/2},$$

$\omega$  being the angle between the axes.

Show that the equation to the circle circumscribing the triangle formed by the three tangents to the parabola

$$r = 2a/(1 + \cos \theta),$$

drawn at the points whose vectorial angles are  $\alpha, \beta, \gamma$ , is

$$r = a \operatorname{cosec} \frac{\alpha}{2} \operatorname{cosec} \frac{\beta}{2} \operatorname{cosec} \frac{\gamma}{2} \cos \left( \theta - \frac{\alpha + \beta + \gamma}{2} \right),$$

and hence that it always passes through the focus.

4. Prove that, in general, four normals can be drawn from any point to an ellipse, and that the sum of the eccentric angles of their feet is equal to an odd multiple of two right angles.

Prove that the locus of the orthocentre of the triangle  $CPD$  formed by two conjugate diameters  $CP$  and  $CD$  of the ellipse  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ , is

$$2(b^2 y^2 + a^2 x^2)^3 = (a^2 - b^2)^2 (b^2 y^2 - a^2 x^2)^2.$$

5. Analyse and then trace the curve

$$x^4 - 3xy + y^3 + 10x - 10y + 21 = 0.$$

A rectangular hyperbola is cut by any circle in four points. Prove that the sum of the squares of the distances of these four points from the centre of the hyperbola is equal to the square on the diameter of the circle.

6. If the coordinate axes are inclined at an angle  $\omega$ , show that the squares of the semi-axes of the conic

$$ax^2 + 2hxy + by^2 = 1$$

are the roots of the equation in  $r^2$ ,

$$r^4 - \left( \frac{a+b-2h \cos \omega}{\sin^2 \omega} \right) r^2 + \frac{ab-h^2}{\sin^2 \omega} = 0,$$

and that its eccentricity  $e$  is given by

$$\frac{e^2}{1-e^2} = \frac{(a+b-2h \cos \omega)^2}{(ab-h^2) \sin^2 \omega} - 4.$$

If the axes are rectangular, show that the above conic can be placed so as to be confocal with the conic

$$a'x^2 + 2h'xy + b'y^2 = 1,$$

provided that

$$\frac{(a-b)^2 + 4h^2}{(ab-h^2)^2} = \frac{(a'-b')^2 + 4h'^2}{(a'b'-h'^2)^2}.$$

## GROUP B

7. If  $\alpha, \beta, \gamma$  be unequal angles each less than  $2\pi$ , prove that the equations

$$\cos(\theta + \alpha) \sec 2\alpha = \cos(\theta + \beta) \sec 2\beta = \cos(\theta + \gamma) \sec 2\gamma$$

cannot coexist unless

$$\cos(\beta + \gamma) + \cos(\gamma + \alpha) + \cos(\alpha + \beta) = 0.$$

Prove that, if  $n$  be an integer,

$$\tan(a_1 + a_2 + \dots + a_{2n}) = \frac{s_1 - s_2 + s_3 - \dots (-1)^{n-1} s_{2n-1}}{1 - s_2 + s_4 - \dots (-1)^n s_{2n}},$$

where  $s_n$  denotes the sum of the products of the tangents  $\tan a_1, \tan a_2, \dots$  taken  $n$  at a time.

8. If

$$\cos^{-1} x + \cos^{-1} y + \cos^{-1} z = \pi,$$

prove that

$$x^2 + y^2 + z^2 + 2xyz = 1.$$

Obtain the sum of the series

$$\tan x + \frac{1}{2} \tan \frac{x}{2} + \frac{1}{2^2} \tan \frac{x}{2^2} + \dots + \frac{1}{2^{n-1}} \tan \frac{x}{2^{n-1}}.$$

Find its limiting value when  $n$  is increased indefinitely.

9. If  $X, Y, Z$  be the middle points of the arcs  $BC, CA, AB$  of the circumscribed circle of the triangle  $ABC$ , show that the radius of the circle inscribed in the triangle  $XYZ$  is

$$4R \sin \frac{B+C}{4} \sin \frac{C+A}{4} \sin \frac{A+B}{4}.$$

Show also that the distance between the orthocentre and the centre of the circumscribed circle of the triangle  $ABC$  is

$$R(1 - 8 \cos A \cos B \cos C)^{\frac{1}{2}}.$$

10. Show that the roots of the equation

$$x^5 + x^4 - 4x^3 - 3x^2 + 3x + 1 = 0$$

are  $2 \cos \frac{2\pi}{11}, 2 \cos \frac{4\pi}{11}, \dots$

Prove that the roots of the equation

$$x^{10} + 11x^5 - 1 = 0$$

are the values of

$$\pm \frac{\sqrt{5}-1}{2} \left( \cos \frac{2r\pi}{5} \pm \sqrt{-1} \sin \frac{2r\pi}{5} \right),$$

where  $r$  is an integer.

11. Show that if

$$\cos \theta + \cos \phi + \cos \psi = 0,$$

and

$$\sin \theta + \sin \phi + \sin \psi = 0,$$

then

$$\cos 3\theta + \cos 3\phi + \cos 3\psi - 3 \cos (\theta + \phi + \psi) = 0,$$

$$\sin 3\theta + \sin 3\phi + \sin 3\psi - 3 \sin (\theta + \phi + \psi) = 0.$$

Prove that

$$(\sin^{-1} x)^2 = x^2 + \frac{2}{3} \frac{x^4}{2} + \frac{2}{3} \cdot \frac{4}{5} \frac{x^6}{3} + \dots$$

where  $\sin^{-1} x$  is the positive or negative acute angle, whose sine is equal to  $x$ .

12. Prove that

$$\sin \theta = \theta \left( 1 - \frac{\theta^2}{\pi^2} \right) \left( 1 - \frac{\theta^2}{2^2 \pi^2} \right) \dots$$

Prove that

$$\frac{\pi}{2} = \frac{2 \cdot 2 \cdot 4 \cdot 4 \cdot 6 \cdot 6 \cdot 8 \cdot 8 \dots}{1 \cdot 1 \cdot 3 \cdot 3 \cdot 5 \cdot 5 \cdot 7 \cdot 7 \dots}$$

## THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Candidates are expected to answer only six questions, of which four are to be selected from GROUP A and the rest from GROUP B*

*All the questions are of equal value*

## GROUP A

1. Show how to adjust the coordinate axes so that the equations of two given non-intersecting lines may be simultaneously brought to the forms

$$\left. \begin{array}{l} y = mx, \\ z = c, \end{array} \right\} \text{ and } \left\{ \begin{array}{l} y = -mx, \\ z = -c. \end{array} \right.$$

If  $P, Q$  be two variable points lying respectively on the two lines, such that  $PQ$  is of an assigned length  $2l$  ( $< 2c$ ), construct the equation of the surface-locus of  $PQ$ , and prove that the mid-point of  $PQ$  describes a conic in the  $xy$ -plane.

2. Identify the hyperbolic paraboloid

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 2z,$$

as a ruled surface, which admits of two distinct sets of generating lines parallel respectively to the two fixed planes

$$\frac{x}{a} + \frac{y}{b} = 0$$

and

$$\frac{x}{a} - \frac{y}{b} = 0.$$

If the two generators associated with a point  $P$  of the surface be at right angles to each other, prove that  $P$  will trace out a plane of the form

$$z = \text{const.}$$

3. Establish the formulæ of transformation of co-ordinates, consequent upon the passage from one triad of rectangular axes to another triad of similar axes, it being given that the new origin is  $(\alpha, \beta, \gamma)$ , and that the direction-cosines of the new set of axes (referred to the old set) are

$$(l_1, m_1, n_1), (l_2, m_2, n_2), \text{ and } (l_3, m_3, n_3).$$

Verify that the determinant

$$\Delta \equiv \begin{vmatrix} l_1 & m_1 & n_1 \\ l_2 & m_2 & n_2 \\ l_3 & m_3 & n_3 \end{vmatrix}$$

possesses the following properties :

(i) the sum of the squares of the elements of any row or of any column is equal to unity;

(ii) the algebraic sum of the products of the corresponding elements of any two rows or of any two columns is nil;

(iii) any element of  $\Delta$  = its own co-factor (taken with the proper sign);

(iv)  $\Delta$  is numerically equal to unity.

## 4. Form the conditions that the cone

$$ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = 0,$$

may be a surface of revolution (it being understood that none of the coefficients  $f, g, h$  vanishes).

Make sure that the cone

$$x^2 + y^2 + z^2 = (2x - 3y + 5z)^2$$

is right circular, and determine the direction of the axis.

## 5. Work out the condition that the plane

$$lx + my + nz = \text{const.}$$

may intersect the quadric

$$ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = \text{const.}$$

in a rectangular hyperbola.

Prove that every plane parallel to

$$x + y + z = 0$$

cuts each of the conicoids

$$3x^2 - 4y^2 + z^2 = 1,$$

and

$$x^2 + 2y^2 - 3z^2 = 2,$$

alone a rectangular hyperbola. Is there any other family of planes, giving sections of the afore-mentioned type?

6. Under what circumstances are three semi-diameters of a central conicoid said to be *conjugate*? Determine the necessary and sufficient conditions that the points

$$P(x_1, y_1, z_1), \quad Q(x_2, y_2, z_2), \quad \text{and} \quad R(x_3, y_3, z_3)$$

may be the extremities of a triad of conjugate semi-diameters of the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1.$$

Prove the following statements, bearing on an arbitrary set of conjugate semi-diameters ( $CP, CQ, CR$ ):

(i)  $CP^2 + CQ^2 + CR^2$  is constant;

(ii) the tetrahedron  $CPQR$  has a constant volume.

[ $N, B - C$  is the centre of the surface.]

7. Define the *principal curvatures* of a surface at an ordinary point, and prove that the two principal radii of curvature at any point  $P$  of the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$$

are proportional to the squares of axes of the central plane section, which is parallel to the tangent plane at  $P$ . Deduce or prove directly that the two principal curvatures are equal when, and only when, the point in question is an umbilic of the surface.

8. Express the condition of tangency of the plane

$$lx + my + nz = p$$

with the hyperboloid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1$$

in the form

$$a^2l^2 + b^2m^2 - c^2n^2 = p^2.$$

Deduce or prove otherwise that the locus of the point of intersection of three orthogonal tangent planes to the surface is a sphere, viz. the director-sphere.

Verify that the two quadrics

$$\frac{x^2}{5} + \frac{y^2}{11} - \frac{z^2}{7} = 1,$$

and

$$\frac{x^2}{4} + \frac{y^2}{15} - \frac{z^2}{10} = 1$$

claim a common director-sphere.

### GROUP B

9. Locate the mass-centre ( $G$ ) of a system of masses

$$(m_1, m_2, m_3, \dots m_n),$$

placed respectively at the terminals of the vectors

$$(a_1, a_2, a_3, \dots a_n).$$

If  $G_1$  is the mass-centre of the same set of masses, when placed respectively at the extremities of

$$(a_1 + \delta, a_2 + \delta, a_3 + \delta, \dots a_n + \delta),$$

and  $G_2$  similarly represents the mass-centre when the displaced positions of the masses are the extreme points of

$$(a_1 - \delta, a_2 - \delta, a_3 - \delta, \dots a_n - \delta),$$

prove that  $G$  coincides with the middle point of the right line  $G_1G_2$ .

[N.B.—All the vectors are supposed to emanate from the same origin.]

10. Resolve an arbitrary vector  $\rho$  along three orthogonal unit vectors  $i, j, k$  in the form

$$\rho = -iS_i\rho - jS_j\rho - kS_k\rho,$$

and confirm the relation

$$\rho^2 = -(S_i\rho)^2 - (S_j\rho)^2 - (S_k\rho)^2.$$

If  $\sigma$  be another vector connected with  $\rho, i, j, k$  by the relation

$$S_i(\rho + \sigma) S_i(\rho - \sigma) + S_j(\rho + \sigma) S_j(\rho - \sigma) + S_k(\rho + \sigma) S_k(\rho - \sigma) = 0,$$

prove that the vectors  $\rho$  and  $\sigma$  have equal tensors.

11.  $\alpha, \beta, \gamma$  being three (non-coplanar) vectors, express the quantity  $S\alpha\beta\gamma$  as a numerical multiple of the volume of a certain tetrahedron, and establish the formula

$$V\alpha\beta\gamma = \alpha S\beta\gamma - \beta S\gamma\alpha + \gamma S\alpha\beta.$$

Hence or otherwise substantiate the identity

$$V\alpha\beta\gamma + V\beta\gamma\alpha + V\gamma\alpha\beta + \alpha S\beta\gamma + \beta S\gamma\alpha + \gamma S\alpha\beta.$$

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*They must attempt the FIRST and SEVENTH questions; full marks may be obtained by answering these questions and any FOUR of the remaining questions*

1. Prove that, under certain conditions to be specified by you,

$$f(a+h) = f(a) + hf'(a) + \dots + \frac{h^{n-1}f^{(n-1)}(a)}{(n-1)!} + \frac{h^n}{n!}f^{(n)}(a+\theta h), \quad 0 < \theta < 1.$$

Deduce that, if  $x$  is small and positive,  $(1+x)^{-\frac{1}{2}}$  is approximately equal to  $1 - \frac{1}{2}x$ , with an error which is less than  $\frac{3}{8}x^2$ .



2. Prove the formula for the radius of curvature of a curve

$$\rho^2 = \frac{\left\{1 + \left(\frac{dy}{dx}\right)^2\right\}^{\frac{3}{2}}}{\left(\frac{d^2y}{dx^2}\right)^2}.$$

Prove that the curve, whose equation is

$$(x^2 + a^2 + c^2)(y^2 + a^2 - c^2) = a^4,$$

has no real points of inflexion unless

$$c^2 < a^2 < \frac{2}{3}\sqrt{3}c^2.$$

- 3 (i) If  $x^3 = 2y$ , prove that the sixth differential coefficient of  $\sin y$  with respect to  $x$  is  $15(4y^2 - 1) \cos y - 2y(4y^2 - 45) \sin y$ .

- (ii) Find the values of  $x$  for which  $\frac{\cos x}{1 + \cot x}$  has a maximum or a minimum.

4. Prove that generally

$$\frac{\partial}{\partial x} \left( \frac{\partial f}{\partial y} \right) = \frac{\partial}{\partial y} \left( \frac{\partial f}{\partial x} \right).$$

If  $f(x, y)$  is defined by saying that

$$f(0, 0) = 0,$$

and that

$$f(x, y) = xy \cdot \frac{x^2 - y^2}{x^2 + y^2},$$

when  $x$  and  $y$  are not both zero; verify that, at  $(0, 0)$ ,

$$\frac{\partial}{\partial x} \left( \frac{\partial f}{\partial y} \right) \neq \frac{\partial}{\partial y} \left( \frac{\partial f}{\partial x} \right).$$

5. Show how to find the envelope of a family of curves given by an equation of the form

$$f(x, y, a) = 0,$$

where  $a$  is a variable parameter.

From a fixed point  $(a, b)$  a line is drawn to  $(0, 3b)$ , meeting  $y = 2b$  in  $(x_1, 2b)$ ; from  $(x_1, 2b)$  a line is drawn to  $(0, 4b)$ , meeting  $y = 3b$  in  $(x_2, 3b)$ ; the process is continued indefinitely. Prove that all the lines touch the curve

$$ex \log_e 2 = 4a \cdot 2^{-x/a}.$$

6. Explain the circumstances under which

$$\phi(x) - \psi(x)$$

can tend to a finite limit when  $\phi(x)$  and  $\psi(x)$  each become infinite at  $x = a$ ; and show how this limit can be found.

If  $f(x) = (x-a)^m \phi(x)$  and  $g(x) = (x-a)^n \psi(x)$ ,

where  $f(x)$  and  $g(x)$  are each regular at  $x = a$ , show that the limit sought is

$$\frac{1}{m!} \frac{d^m}{da^m} \{f(a) - g(a)\}.$$

Find the limiting value as  $x$  tends to 0 of

$$\left\{ (\sec x)^{\frac{6}{x^2} + 1} - (\sec x)^{\frac{6}{x^2} - 1} \right\} \frac{1}{x^2}.$$

7. Integrate *any three* of the following :—

$$\frac{1}{\sqrt{(x-a)(x-b)}}, \quad \frac{1}{(ax^2+2bx+c)^{\frac{3}{2}}}, \quad \frac{1}{\sin x + \cos x}, \quad \frac{1}{1+3e^x+2e^{2x}}.$$

8. Evaluate *any two* of the following :

$$\begin{aligned} \text{(i)} \quad & \int_1^0 \log(y^2 \sqrt{1-y^2}) \frac{dy}{\sqrt{1-y^2}}, \quad \text{(ii)} \quad \int_0^{\pi/2} \log(\sin \theta) d\theta, \\ \text{(iii)} \quad & \int_0^{\infty} \frac{dx}{1+x^{\frac{4}{3}}}, \quad \text{(iv)} \quad \int_0^{\pi/2} \sin^4 \theta \cos^3 \theta d\theta. \end{aligned}$$

9. Find the area between the  $y$ -axis and the curve

$$xy^2 = a^2(a-x).$$

Find also the area of one loop of the curve

$$r^2 \sin^4 \theta + a^2 \cos 2\theta = 0.$$

10. Explain how to find the singular solution of a differential equation of the first order from the differential equation and also from the complete primitive.

Solve and interpret geometrically the solutions of the equation

$$8y = 12px - 9p^3x.$$

11. *Either*, (i) Prove that the equation (in rectangular coordinates)

$$y = \frac{2}{3}h + \frac{4h}{\pi^2} \left( \cos \pi x - \frac{1}{2^2} \cos \frac{2\pi x}{k} + \frac{1}{3^2} \cos \frac{3\pi x}{k} - \dots \right)$$

represents a series of equal and similar parabolic arcs of height  $h$  and span  $2k$  standing in contact along the axis of  $x$ .

Or, (ii) If

$$V = \sum_{n=1}^{\infty} (-1)^{n-1} \frac{\sin n\pi e^{-ny}}{n},$$

prove that

$$\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2} = 0 \quad \text{when } y > 0,$$

$$V = 0 \quad \text{when } y = \infty,$$

and when  $y = 0$ ,  $V = \frac{x}{2}$  for all values of  $x$  between  $+\pi$  and  $-\pi$ .

12. Solve *any two* of the following differential equations :

$$\text{(i)} \quad \frac{dy}{dx} \sin x - y \cos x + y^2 = 0, \quad \text{(ii)} \quad (x^2 - y^2) \frac{dy}{dx} + 3xy = 0,$$

$$\text{(iii)} \quad \frac{dy}{dx} = \frac{2x+3y+9}{2x+3y-1}, \quad \text{(iv)} \quad \frac{d^2y}{dx^2} + 16y = 2 \sin 3x.$$

## FIFTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Attempt six questions only*

*All questions are of equal value*

1. Enunciate the principle of virtual work. Deduce from the principle of virtual work the analytical conditions of equilibrium of any number of forces acting on a rigid body in one plane.

Six equal heavy bars are freely jointed at their extremities, one is fixed on a horizontal plane, and the system lies in a vertical plane; the middle points of the two upper non-horizontal bars are connected by a rope in a state of tension. Obtain this tension by the principle of virtual work.

2. A solid cone, of height  $h$  and semivertical angle  $\alpha$  is placed with its base against a smooth vertical wall and is supported by a string attached to its vertex and to a point in the wall. Show that the greatest possible length of the string is  $h\sqrt{1+\frac{1}{3}\tan^2\alpha}$ .

3. Two equal smooth spheres are placed inside a hollow cylinder, open at both ends, which rests on a horizontal plane. Find the least weight of the cylinder in order that it may not be upset.

4. A heavy right cone is placed with its base on a rough inclined plane, the inclination of which is gradually increased. Determine whether the initial motion of the cone will be one of sliding or tumbling over.

5. (i) If  $a, b, c, d$  are the distances of the vertices of any quadrilateral area from a plane, and  $e$  the distance of the point of intersection of its diagonals from the plane, show that the distance of its centroid from the plane is

$$\frac{1}{3}(a+b+c+d-e).$$

(ii) Find the centroid of the portion of an ellipse cut off by a line joining the extremities of the major and minor axes.

6. (i) If a uniform inextensible string hangs freely over any two smooth pegs, the vertical portions which hang over the pegs must each terminate on the horizontal axis of the catenary. Establish.

(ii) Given two smooth pegs on a horizontal line, find the least length of a uniform heavy string which will rest over them.

7. An endless elastic string, whose modulus of elasticity is  $\lambda$  and natural length is  $2\pi c$ , is placed in the form of a circle on a smooth horizontal plane and is acted upon by a force from the centre equal to  $\mu$  times the distance per unit mass of the string. Show that its radius will vary harmonically about a mean length

$$\frac{2\pi\lambda c}{2\pi\lambda - m\mu c},$$

where  $m$  is the mass of the string, assuming  $2\pi\lambda > m\mu c$ .

Examine the case when  $2\pi\lambda = m\mu c$ .

8. (i) Obtain the velocities and accelerations of a particle moving in a plane along and perpendicular to the radius vector to it from a fixed origin in the plane.

(ii) Show that the path of a point  $P$  which possesses two constant velocities  $u$  and  $v$ , the first of which is in a fixed direction and the second of which is perpendicular to the radius  $OP$  drawn from a fixed point  $O$ , is a conic whose focus is  $O$  and whose eccentricity  $\frac{u}{v}$ .

9. (i) For a central orbit establish the relation

$$F = \frac{h^2}{p^3} \frac{dp}{dr}.$$

(ii) A particle of unit mass describes an equiangular spiral, of angle  $\alpha$ , under a force which is always in a direction perpendicular to the straight line joining the particle to the pole of the spiral. Show that the force is  $\mu r^{2\sec^2\alpha - 3}$ , and that the rate of description of sectorial area about the pole is

$$\frac{\pi}{2} \sqrt{\mu \sin \alpha \cdot \cos \alpha} \cdot r^{\sec^2 \alpha}.$$

10. (i) A particle is projected at an angle  $\alpha$  with the horizontal from the foot of a plane, whose inclination to the horizon is  $\beta$ . Show that it will strike the plane at right angles, if  $\cot \beta = 2 \tan (\alpha - \beta)$ .

(ii) The radii of the front and hind wheels of a carriage are  $a$  and  $b$ , and  $c$  is the distance between the axle trees; a particle of dust driven from the highest point of the hind wheel is observed to alight on the highest point of the front wheel. Show that the velocity of the carriage is

$$\sqrt{\frac{(c+b-a)(c+a-b)}{4(b-a)}} \cdot g.$$

11. (i) Two spheres of given masses moving with given velocities impinge directly. Show that there is a loss of kinetic energy, and find the amount.

(ii) From a point in a smooth horizontal plane a particle is projected with velocity  $u$  at an angle  $\alpha$  to the horizon. If the coefficient of restitution between the particle and the plane be  $e$ , find the distance described along the plane before the particle ceases to rebound.

## SIXTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer SIX questions, THREE from each group*

*All questions are of equal value*

### GROUP A

1. Show that the pressure gradient in a liquid of density  $\rho$  in equilibrium under the action of a force  $F$  per unit mass in the  $x$ -direction is given by

$$\frac{dp}{dx} = \rho F.$$

A heavy gas at constant temperature is confined in a vertical cylinder of height  $h$ . If  $p_0$  and  $\rho_0$  be the pressure and the density respectively of the gas at the base of the cylinder, prove that the mean density of the gas is

$$\frac{p_0}{hg} \left( 1 - e^{-\frac{\rho_0 gh}{p_0}} \right).$$

2. Define *centre of pressure*. Show that when a plane area is immersed vertically in a homogeneous liquid its centre of pressure is not altered by rotating the area about its line of intersection with the surface of the liquid.

A system of coaxial circles is immersed in water with the line of centres at a given depth. Prove that centres of pressure of those circular areas which are completely immersed lie on a parabola.

3. Find the resultant thrust on a heavy body immersed in water, and deduce the conditions of equilibrium of a floating body.

A right circular cone has a plane base in the form of an ellipse; the cone floats with its longest generating line horizontal; if  $\theta$  be the vertical angle and  $\phi$  the angle between the plane base and the shortest generating line, show that

$$\cot \phi = \cot 2\theta - \frac{1}{3} \operatorname{cosec} 2\theta.$$

4. Determine the conditions of stability of a body floating freely in a liquid.

A solid paraboloid of revolution floats in a liquid with its axis vertical and vertex downwards. Prove that the distance between the centre of buoyancy and the metacentre is constant, and that the equilibrium will be stable if

$$\frac{3a}{h} > 1 - \sqrt{\frac{\sigma}{\rho}},$$

4a being the latus rectum of the generating parabola;  $h$  the height of the solid, and  $\sigma$  and  $\rho$  the densities of the solid and the liquid respectively

5. Describe and explain the action of Smeaton's air pump. Calculate the amount of exhaustion possible by  $n$  complete strokes of the piston.

If  $c$  = length of the barrel in a Smeaton's pump,  $a$  = the distance of the piston in its highest position from the top of the barrel,  $b$  = the distance of the piston in its lowest position from the base of the barrel, and  $P$  the atmospheric pressure, show that the pressure of the air in the receiver cannot be less than

$$\frac{abP}{(c-a)(c-b)}.$$

#### GROUP B

6. Explain the different systems of coordinates used in astronomy for defining positions of celestial objects, and state how they are measured on the surface of the celestial sphere.

Show that in latitude  $45^\circ$  the interval between the time at which any star passes due east and the time of its setting is constant and is equal to half a sidereal day.

7. Define the *equation of time* and show that it vanishes four times a year.

If at Greenwich  $\alpha$ ,  $\alpha'$  are hour angles (in degrees) of the sun at  $t$  and  $t'$  hours of mean time, find expressions for the equations of time at the preceding and the following mean noon.

8. Describe the methods of determining the exact position of a ship in mid-ocean.

If the sun's meridian altitude be observed to be  $63^\circ 42' 19''$  on the 22nd August when the chronometer indicated 7 h. 40 m 19 s. and the sun's declination at the preceding Greenwich mean noon be  $21^\circ 15' 27''$ , its hourly motion in declination being  $-29' 2''$ , find the latitude of the place of observation.

9. Explain *direct* and *retrograde* motion of a planet. What are stationary points?

If  $\theta$  be the angle subtended at the earth by the sun and a stationary point of a planet's orbit, and  $\phi$  the greatest elongation of the planet, prove that

$$2 \cot \theta = \sec \frac{\phi}{2} + \operatorname{cosec} \frac{\phi}{2}.$$

10. Find the conditions of a lunar eclipse, and explain as fully as possible how the beginning, duration, and ending of a lunar eclipse may be calculated.

If solar ecliptic limits be  $15^{\circ} 32'$  and  $18^{\circ} 36'$ , lunar ecliptic limits be  $12^{\circ}$  and  $9^{\circ} 30'$  and the daily advance of the sun relative to the node =  $62'$ , calculate the possible number of solar and lunar eclipses in a year,

### MATHEMATICS—PASS

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### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable.*

*Only SEVEN questions to be attempted, of which not more than FOUR to be selected from the same group*

*All the questions are of equal value*

### GROUP A

1. In any triangle

(i) if  $\cos A = \frac{\sin B}{\sin C}$ , prove that the triangle is isosceles ;

(ii) prove that

$$a \sin (B-C) + b \sin (C-A) + c \sin (A-B) = 0.$$

2. With the usual notation, establish the following

(i)  $S = \sqrt{s(s-a)(s-b)(s-c)}$

(ii)  $r_1 + r_2 + r_3 = r + 4R.$

3. (i) Show that

$$(1) \tan(2 \tan^{-1} a) = 2 \tan(\tan^{-1} a + \tan^{-1} a^3);$$

$$(2) \tan^{-1} \frac{1}{5} + \tan^{-1} \frac{1}{8} + \tan^{-1} \frac{1}{10} + \tan^{-1} \frac{8}{21} = \frac{\pi}{4}.$$

(ii) Solve the equation  $3 \sin \theta + 2 \cos^2 \theta = 0$ .

4. (i) State De Moivre's Theorem *completely* and establish it for a real, positive, integral index.

(ii) Find the three cube roots of  $1 + \sqrt{-1}$ .

5. (i) If  $\theta$  lies between  $-\frac{\pi}{4}$  and  $+\frac{\pi}{4}$ , prove that

$$\theta = \tan \theta - \frac{1}{3} \tan^3 \theta + \frac{1}{5} \tan^5 \theta - \dots$$

(ii) Sum the series

$$\sin a + \sin \left( a + \frac{\pi}{n} \right) + \sin \left( a + \frac{2\pi}{n} \right) + \dots \text{to } n \text{ terms.}$$

6. Express  $(a + ib)^{p+iq}$  in the form  $A + iB$ , where  $a, b, p, q$  are all real. Hence determine the condition that the given expression may be real.

7. (i) Establish the exponential value of  $\cos \theta + i \sin \theta$ , and from it deduce the exponential values of  $\cos \theta$  and  $\sin \theta$  respectively.

(ii) Prove that  $i^n = e^{-i(n+1)\frac{\pi}{2}}$ .

### GROUP B

8. Find an expression for the distance between the two points whose rectangular Cartesian coordinates are  $(x_1, y_1)$  and  $(x_2, y_2)$  respectively.

Show that the points  $(a, a)$ ,  $(-a, -a)$ ,  $(-a\sqrt{3}, a\sqrt{3})$  are the vertices of an equilateral triangle, the axes being rectangular.

9. Obtain the condition that the straight lines (axes rectangular)

$$ax + by + c = 0$$

$$a'x + b'y + c = 0$$

may be mutually at right angles.

Find the equation of the straight line through the intersection  $x + 2y = 0$  and  $y + 4x + 7 = 0$ , which is perpendicular to the straight line  $3x - y = 0$ .

10. Determine the value of  $c$  for which the equation  $2x^2 - y^2 + xy - 2x - 5y + c = 0$  will represent a pair of straight lines.

Obtain the coordinates of their point of intersection.

11. Find the equation of the tangent at any point  $(x', y')$  on the circle  $x^2 + y^2 = a^2$ .

Show that the circles  $x^2 + y^2 - 4x + 6y + 8 = 0$  and  $x^2 + y^2 - 10x - 6y + 14 = 0$  touch at the point  $(3, -1)$ .

12. Obtain the equation of the parabola whose focus is at the point  $(-1, 1)$  and whose directrix is the straight line  $x + y + 1 = 0$ .

Show that the chord  $4x + 3y + 1 = 0$  of the parabola  $y^2 = 8x$  is bisected at the point  $(2, -3)$ .

13. Show that the line  $y = \mu x + \sqrt{a^2 \mu^2 + b^2}$  will touch the ellipse  $x^2/a^2 + y^2/b^2 = 1$  for all values of  $\mu$ .

An ellipse slides between two straight lines mutually at right angles. Show that the locus of its centre is a circle.

14. Find the equation of a hyperbola referred to its two asymptotes as axes.

Prove that the chords of a hyperbola which touch the conjugate hyperbola are bisected at their points of contact.

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

SEVEN questions carry full marks, viz. THREE from

GROUP A and FOUR from GROUP B

## GROUP A

1. Find from first principles the differential coefficient of  $\tan \frac{x}{a}$ .

Differentiate

(i)  $x^{x^2}$  ;                      (ii)  $\sin^{-1} \frac{2x}{1+x^2}$  .

2. State and prove Leibnitz' Theorem.

If  $y = x^b \log x$ , find  $y_n$ .

3. State Maclaurin's Theorem for the expansion of  $f(x)$  in powers of  $x$ . Assuming the possibility of such expansion, prove the theorem without assuming Taylor's Theorem.

Expand  $\tan x$  in ascending powers of  $x$  up to the third term).

4. Prove that the subtangent is of constant length at any point on the curve

$$\log y = x \log a ;$$

and that the subnormal is constant at any point on the parabola  $y^2 = 4ax$ .

5. (i) Find the limiting value of  $\frac{x - \sin x}{x^3}$ , when  $x \rightarrow 0$ .

(ii) Find the radius of curvature at any point on a parabola of latus rectum  $4a$ .

## GROUP B

6. Find the integrals of

$$\frac{1}{a^2 - x^2}, \quad \frac{\cos 2x}{\sin x}, \quad \frac{2+x^2}{1-x^2}$$

7. Show that

(i)  $\int_0^1 \frac{\sin^{-1} x}{\sqrt{1-x^2}} dx = \frac{\pi^2}{8}$  ;

(ii)  $\int_a^\beta \frac{1}{\sqrt{(x-a)(\beta-x)}} dx = \frac{\pi}{\beta-a}$  ;

(iii)  $\int_0^\pi \log \tan x dx = 0$ .

8. (i) Find the equation to the curve at every point of which the cartesian subtangent is twice the abscissa, and which passes through (8, 4).

(ii) Find the general equation of the curve at every point of which the polar subnormal is  $2a$ .

9. (i) Find the length of the arc of the equiangular spiral  $r = ae^{\theta \cot \alpha}$  between two radii vectors  $r_1$  and  $r_2$ .



(ii) Find the intrinsic equation of the cycloid

$$x = a(\theta + \sin \theta),$$

$$y = a(1 - \cos \theta);$$

the arc being measured from the origin.

10. Find the area of a loop of

(i)  $x^4 + y^4 = 2a^2 xy$ ;

(ii)  $r^2 = a^2 \cos 2\theta$ .

11. Solve

(i)  $x(y-x)\frac{dy}{dx} = y^2$ ;

(ii)  $\frac{d^2y}{dx^2} - 5\frac{dy}{dx} + 6y = 0$ ;

(iii)  $x\frac{dy}{dx} + y = x^3$ .

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Any six questions carry full marks; but not more than FOUR from either group should be attempted*

*All the questions are of equal value*

#### GROUP A

1. Prove that the surface of separation between two fluids of different densities is a horizontal plane.

An isosceles triangle is immersed vertically in a fluid with its vertex coincident with the surface of the fluid and its base horizontal; determine how it must be divided by a line parallel to the base, that the pressures upon the upper and lower portions may be respectively in the ratio of  $m : n$ .

2. Define the centre of pressure of a plane area immersed in a liquid.

Find the centre of a parallelogram immersed in a liquid with one angular point in the surface and one diagonal horizontal.

3. Obtain the conditions of equilibrium of a body floating freely in a liquid and prove that a solid cannot float in a liquid of less density than its own.

A right circular cylinder floats in water with its axis vertical, half of its axis being immersed; assuming the specific gravity of the air to be  $s$ , find that of the cylinder.

4. Find the specific gravity of a mixture of substances of given weights and specific gravities.

Prove that the specific gravity of a mixture of given substances is greater when equal volumes are taken than when equal weights are taken.

5. Enunciate Boyle's Law, and show how it can be verified experimentally.

A heavy sphere is placed in a vertical cylinder, filled with atmospheric air, which it exactly fits. Find the density of the air in the cylinder when the sphere is in a position of permanent rest.

6. Describe the Common Pump and its action.

Find the height the water rises in one stroke of the piston.

## GROUP B

7. Define—ecliptic, declination, right ascension, celestial longitude, hour angle.

Prove that the altitude of the celestial pole at any place is equal to the latitude of the place. Prove that the altitude of a star is greatest when on the meridian.

8. Describe the transit instrument, and explain how it is corrected for the various errors to which its readings are subject.

Two stars culminate at the same time and the angular distance between them is  $10^\circ$ . If the declination of one of them is twice that of the other, find their declinations.

How do you find the pole by observation of the transits of a circumpolar star?

9. Explain the phenomenon of the seasons.

Explain how the average amount of heat derived from the sun each day in summer is greater than in winter, and further how the mean temperature is higher in August than in June, and lower in February than in December.

10. Enumerate the different causes which produce an apparent change in the position of a body, and explain the change produced in each case.

Where must a star be situated so as to have no displacement due to annual parallax? Where must it be situated so that the effect of annual parallax may be greatest?

The apparent altitude of a star due to refraction is  $30^\circ$ ; calculate the true altitude, the coefficient of refraction being  $58'2''$ .

11. State the cause of a solar eclipse, and explain under what circumstances it is (i) total, (ii) partial (iii) annular.

Determine the frequency of eclipses both of the sun and of the moon, and find the least possible number as also the greatest possible number of them at a particular place in the whole year.

12. Define the 'equation of the time', and state from what causes it arises. What is the greatest value? How many times in the year does it vanish, and at what dates?

The times of sunrise and sunset on November 1 are found from the tables to be 6 h. 56 m. and 4 h. 32 m. respectively. Find approximately the equation of time.

## PHYSICS—HONOURS

Paper-Setters— (Pass & Hons.)	{	PROF. C. V. RAMAN, M.A., Ph.D., D.Sc., F.R.S., N.L.
		DR. MEGHNAD SAHA, D.Sc., F.R.S.
		MR. SATYENDRANATH BOSE, M.Sc.
		PROF. PHANINDRANATH GHOSH, M.A., Ph.D., Sc.D., F.Inst.P.
		„ DEBENDRAMOHAN BOSE, M.A., B.Sc., Ph.D.
	{	MR. TULSIDAS KAR, M.A.

Examiners— { REV. FATHER E. ROELAND, S.J.  
 MR. D. H. ROBERTS, M.A.  
 „ PRASANTACHANDRA MAHALANOBIS, B.A.  
 DR. MEGHNAD SAHA, D.Sc.

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Not more than THREE questions to be attempted from each group*

*All questions are of equal value*

#### GROUP A

1. Derive the analytical expression for progressive waves in a medium, and deduce the velocity and acceleration of a particle in the wave.
2. Derive the expression for the potential due to a thick spherical shell.  
 Find the value of the mean radius of the Earth from the following data :—  
 Constant of gravitation =  $6.6607 \times 10^{-8}$  c.g.s. units.  
 Mean density of the Earth = 5.5247 gm per c.c.  
 Acceleration due to gravity = 978.0027 cm. per sec. per sec. at a latitude of  $45^\circ$ .
3. State clearly Jaeger's method of determining the surface tension of a liquid, and give the theory underlying it.
4. Describe any method of determining the viscosity of gases.
5. Deduce the relation between the osmotic pressure and the lowering of the vapour pressure of any solution

#### GROUP B

6. State clearly a method of determining the absolute value of pitch of a tuning-fork.
7. Obtain expressions for the possible tones yielded by rods in longitudinal vibration when fixed in the middle. How many they be elicited ?
8. What is meant by the term 'combinational tones' ? Give any two methods by which they may be experimentally determined.
9. Explain Doppler's principle as applied to acoustical phenomena.

The pitch of the horn of a motor-car approaching an observer at the rate of 30 miles per hour is perceived to be 266.6. If the velocity of the sound in air is 1,100 ft. per second, what is the actual pitch of the horn ?

#### SECOND PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Not more than six questions to be attempted*

*The questions are of equal value*

1. Describe an accurate method of measuring the coefficient of absolute expansion of mercury.

The cubic expansion of mercury between  $0^\circ$  and  $100^\circ$  is given by the formula

$$v = v_0 [1 + 0.000181t + 0.78 \times 10^{-8} t^2],$$

where  $t$  represents the temperature on the thermodynamic scale. If mercury

is used as the thermometric substance, what will be the temperature  $t'$  recorded by it corresponding to the thermodynamic temperature  $t=50^\circ$  ?

2. Describe an experimental method of measuring the specific heat of a substance like copper at low temperatures. State the nature of the results obtained.

3. Describe experimental methods of measuring the conduction of heat in gases. How have the conductivities of gases been correlated with their other properties ?

4. Deduce Boyle's law from the kinetic theory of gases, and show how the theory explains the deviations from the law.

5. Deduce the law of corresponding states, and indicate the range of its applicability.

6. Give an account of some of the more important investigations by which the heat equivalent of mechanical energy has been determined.

7. The thermodynamic scale of temperature is independent of the properties of the working substance used for measuring it. Show how the temperatures measured by means (a) a perfect gas, and (b) radiation from a black body enclosure satisfy this condition.

Indicate how the temperatures are measured with the help of these two substances, and the ranges over which they can be used as standards. How are the two ranges correlated ?

8. Describe Joule-Thomson's experiment on the flow of gas through a porous plug. What bearing has the Joule-Thomson effect on the methods now used for liquefying gases ?

9. Deduce from the thermodynamic principles an expression for the effect of pressure on the melting-point of ice.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any six questions*

*All questions are of equal value*

1. Define principal planes and nodal points of a lens-system. Investigate mathematically their positions for a single thick double-convex lens.

2. What are the usual defects in the image formed by a single lens? Explain in general terms how they have been removed or minimized in modern photographic objectives.

3. Discuss the resolving power of a microscope.

4. Describe some recent method of determination of velocity of light with terrestrial sources. How can determination of light-velocity in transparent medium be said to decide in favour of the wave theory of light propagation?

5. Explain the origin of diffraction-patterns you would observe through a telescope pointed towards a distant source of light, a narrow rectangular aperture being placed in front of the telescopic objective.

6. Give the theory of formation of a spectrum by a concave grating. What are the principal advantages of the use of a concave grating in spectroscopy?

7. Describe some refractometer suitable for determining the refractive index of a gas and its variation with density and wave-length. State the nature of the results obtained.

8. How has double refraction in uniaxial crystals been explained theoretically? How would you proceed to verify the theory?

9. What experimental arrangements have been used to investigate infra-red spectra?

#### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only six questions to be attempted*

*All questions are of equal value*

1. Describe the following instruments, discussing how far they are alike, and how far they differ from each other:—(a) an ammeter, (b) a voltmeter, (c) a milliammeter, (d) a millivoltmeter.

You are given a milliammeter reading up to 50 milliamperes. How would you convert it to a voltmeter reading up to 250 volts? The resistance of the milliammeter is 6 ohms.

2. Describe with full theory a very sensitive form of quadrant electrometer, and discuss on what factors its sensitiveness depends.

How can you use the quadrant electrometer for measuring very small currents, such as are obtained in the ionization of gases?

3. Prove from thermodynamical argument that the Peltier coefficient  $\Pi = T \frac{dE}{dT}$ , where  $E$  = thermo-electric force. How would determine  $\Pi$  experimentally?

4. Define self-induction and prove that a henry =  $10^9$  cm. How can you measure the self-induction of a coil of the order of a henry?

5. Distinguish between diamagnetic, paramagnetic, and ferromagnetic substances, and illustrate by a simple experiment.

How would you measure the permeability of a given sample with the aid of a ballistic galvanometer?

6. Distinguish between the different types of radiation given out by radium, and give a brief account of their nature and properties.

7. Prove from elementary considerations that the orbit of an electron which is projected at right angles to a magnetic field is a circle of radius

$f = \frac{mrc}{He}$ , and the orbit of the same when projected in an e.s. field at right angles to the field is a parabola of latus rectum

$$l = \frac{2mr^2}{Xe}.$$

( $H$  = magnetic field;  $X$  = electric field;  $e, m$ , charge and mass of the electron;  $v$  = velocity of light.)

8. Give an account of Bohr's theory of the hydrogen spectrum.

9. Describe the principles underlying the experimental arrangements by which human speech can be conveyed over large distances with the aid of electro-magnetic waves.

## PHYSICS—PASS

<i>Examiners—</i>	{	Mr. DWIJENDRAKUMAR MAJUMDAR, M.A.
		„ GANGADHAR MUKHERJEE, M.A.
		„ PRAMODCHARAN SEN, M.Sc.
		„ DWARKANATH MUKHERJEE, M.Sc.
		„ AMARESHCHANDRA CHAKRABARTI, M.Sc.
		„ JITENDRANATH SEN, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer not more than six questions*

*The questions are of equal value*

1. Two simple harmonic oscillations of equal frequency and amplitude but in perpendicular directions are compounded. Find the resulting motion graphically.
2. If the earth were a solid sphere of iron of radius 6·37 million metres and of density 7·86 grams per c.c., what would be the value of gravity at its surface, taking the gravitation constant to be  $6·658 \times 10^{-8}$  C.G.S. units?
3. Describe a method of measuring the surface-tension of water.
4. A hammer drops from a known height on a piece of lead placed on an anvil. The lead piece is then immediately transferred into a calorimeter containing a weighed quantity of water. Find an expression for the observed rise of temperature.
5. Describe the common thermos or Dewar flask and explain the physical principles on which its utility is based.
6. Describe the construction and explain the theory of the gas thermometer.
7. Sketch the optical arrangements in a reflecting telescope and explain in what respects this is superior to a refracting telescope.
8. State and explain the differences noticed between the spectrum of sunlight and that of a white-hot solid body.
9. Explain how the wave-length of light may be measured.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only six questions to be attempted*

*The questions are of equal value*

1. Prove that the frequency of vibrations of a stretched string is equal to  $\frac{1}{2l} \sqrt{\frac{T}{m}}$ , where  $T$  is the tension,  $l$  the length, and  $m$  the mass per unit length of the string.

Explain what harmonics will be present and what absent when the string is struck at the middle point.

2. Explain what you understand by the musical interval between two notes. What intervals are used in the diatonic major scale? What is temperament, and why is the tempered scale used in keyed instruments?

3. What is an electromagnet, and why is it used in preference to permanent magnets? Explain on what depends the field strength giving quantitative relation as far as possible. What is the precaution to be taken to maintain the field of a strong electromagnet constant?

4. Describe the magnetometer method for finding  $H$  at any place, explaining the adjustments in detail and the precautions to be taken to minimize errors.

5. Prove Gauss's theorem on total normal induction over a closed surface and apply it to obtain the intensity just outside a charged conductor.

6. A spherical conductor of radius 5 cm. and charged to a potential of 48 e.s. units, is placed at a great distance from another of radius 8 cm. and charged to a potential of  $-30$  e.s. units. Calculate the potential at a point midway between the centres of the spheres.

7. Describe any form of an absolute electrometer and explain its use, deducing the formula to be used.

8. State and explain Kirchhoff's laws on the distribution of current in a network of conductors.

A battery of E.M.F. 12 volts and of internal resistance 6 ohms is connected in parallel to another of E.M.F. 8 volts and of internal resistance 4 ohms. The terminals of the composite battery so formed are joined by a wire of resistance 12 ohms. Calculate the currents passing through the different parts of the circuit.

9. Describe a moving-coil galvanometer and explain its adjustments. Deduce the law. What condition must be satisfied that it may obey the tangent law?

10. A vertical coil is rotated with constant angular velocity in a uniform horizontal magnetic field about a vertical axis in the plane of the coil. Show by a graph or an equation the variation of the E.M.F. generated in the coil during a complete rotation.

## CHEMISTRY—HONOURS

(SIR P. C. RAY, Kt., C.I.E., D.Sc., Ph.D.,  
F.C.S.

PROF. PRAPHULLACHANDRA MITTER, M.A., Ph.D.

*Paper-Setters—* „ JNANENDRANATH MUKHERJEE, D.Sc.

(*Pass & Hons.*) DR. JNANENDRACHANDRA GHOSH, D.Sc.

MR. P. R. RAY, M.Sc.

(DR. SUDHAMAY GHOSH, D.Sc.

DR. PANCHANAN NIYOGI, M.A., Ph.D.

*Examiners—* } MR. ASUTOSH MAITRA, M.A.

„ BARUNCHANDRA DATTA, M.A.

„ PRIYADARANJAN RAY, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Attempt FIVE questions only*

*The questions are of equal value*

1. What are the mercaptans? How are they prepared? State their properties and reactions.

In what way are they related to the sulphonic acids and the thio-ethers?

2. What are the enzymes? Discuss the action of the enzymes concerned in the preparation of alcohol from starchy grains. What theory is adduced to explain alcoholic fermentation?

3. How would you proceed to prepare pure glucose from (a) cane sugar, (b) starch? How is glucose distinguished from fructose?

How would you convert glucose into (a) fructose, (b) a sugar containing one carbon atom more, (c) a sugar containing one carbon atom less?

4. Write a short account of the stereo-chemistry of the tartaric acids and the methods that may be used for the resolution of racemic acid.

5. A certain substance on analysis gave C=52.2, H=3.7, and Cl=44.1 per cent. When oxidized with alkaline potassium permanganate it yielded benzoic acid. Deduce the identity of the substance and also show how it is produced and how it reacts with aqueous alkali.

6. Explain with illustrations the mechanism of the following reactions:—(a) Claisen's reaction; (b) Kn even vel's reaction; (c) Friedel-Craft's reaction.

7. Write an essay on Kekule's theory of the benzene ring and its effect on the development of organic chemistry.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions are to be attempted*

*The figures in the margin indicate full marks*

1. Give a brief history of the discovery of the inactive gases. How are Argon and Helium obtained, and for what purposes are they used? 20

2. Write a short essay on one of the following subjects:— 20

(a) The passive state of metals.

(b) The effect of traces of moisture in promoting chemical change.

3. Describe the action of the following on a solution of cupric sulphate, giving equations:—(a) potassium iodide, (b) potassium cyanide, (c) ammonium thiocyanate, (d) ammonium hydroxide, and (e) a mixture of caustic potash and potassium tartarate. 20

4. Describe the general properties of the sub-group Mg, Zn, Cd, and Hg. 20

What principles are involved in the manufacture of metallic zinc? Why cannot magnesium be prepared similarly?



5. It is said that sulphurous acid is a tautomeric compound. Discuss the existing evidence in support of this statement. Describe the means you would adopt in order to prepare sodium thiosulphate and sodium hydrosulphite from sodium sulphite. Explain the action of iodine on each of these three compounds. 20

6. Trace the successive reactions involved in the production of hypochlorites, chlorates, and perchlorates, discussing the chemical changes occurring at each stage and the conditions under which it takes place. By what properties are these salts severally distinguished? How would you account for the valency of chlorine in these compounds? 20

7. Give a short account of the preparation and properties of the hydrides and halides of silicon, and compare them with those of carbon. 20

8. Explain and illustrate the oxidizing action of potassium dichromate, potassium permanganate, potassium iodate, and potassium ferricyanide, indicating specially the conditions under which the oxidation takes place. How much weight of each would you employ in order to obtain 2.5 gms. of iodine from a solution of potassium iodide under most suitable conditions? 20

(K = 39, Cr = 52, Mn = 55, Fe = 56, I = 127.)

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Any FIVE questions carry full marks*

1. Give an account of Maxwell's Law of distribution of velocities, and explain the following:—most probable velocity, root of the mean square velocity, mean velocity. How are these quantities related?

2. Distinguish between the changes in the free energy, the internal energy, and latent energy associated with a chemical reaction. Give an equation correlating these quantities. Illustrate with one example the usefulness of the equation.

3. Write a connected account of the kinetics of gaseous reactions.

4. Explain, with one illustration of each, what is meant by—(a) polarizable electrodes, (b) non-polarizable electrodes, (c) mean activity coefficient. Describe in detail one method for measuring the mean activity coefficients of the ions of hydrochloric acid.

5. Describe fully the methods you may use to determine the solubility of a sparingly soluble salt. Give a brief outline of the main conclusions drawn from a study of the influence of neutral electrolytes on their solubilities.

6. Discuss the contributions to our knowledge that have resulted from a study of the formation, disintegration, and the products of disintegration of radium.

7. Describe a method for measuring the osmotic pressure of a solution. Deduce a relation between the osmotic pressure and the relative lowering of the vapour pressure of a solution.

8. What is meant by the transport number of an ion? How is it determined? A molar solution of cadmium iodide showed an anion transport number of 1.12. How would you account for this result?

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions are to be attempted*

*The questions are of equal value*

- Write a short essay on one of the following subjects :—
  - The use of electricity in chemical industries.
  - The employment of catalysts in technical gas-reactions.
- Give a short account of the various methods for the manufacture of steel explaining clearly the chemical reactions involved, with special reference to the elimination of carbon and phosphorus.
- Describe the preparation and state the uses of—
  - pure alumina from bauxite,
  - chrome-alum from chromite.
  - white lead from metallic lead,
  - anthracene from tar,
  - salicylic acid from phenol.
- Write short notes on the following :—(a) peptization, (b) cupellation, (c) hydrogenation, (d) destructive distillation, (e) saponification.
- In analytical methods an excess of the reagent is usually employed to ensure complete precipitation. How would you account for it?  
 One litre of a saturated solution of calcium sulphate at 18° contains 0.015 mol of the salt. Calculate how much calcium sulphate should be precipitated by the addition of 0.025 mol of potassium sulphate to one litre of this saturated solution, both salts being regarded as practically completely ionized.
- Explain clearly the principles underlying the methods for the quantitative separation of iron from manganese, and for the qualitative detection of chloride, bromide, and iodide when present together in a mixture. How would you detect traces of manganese in a substance?
- Explain the nature, from a chemical point of view, of the chief operations involved in the production of a photograph.

## CHEMISTRY—PASS

DR. ALI KARIM.

MR. HARIDAS MUKHERJEE, M.A.

Examiners—  
 { „ ANANDAKISOR DAS, M.A.  
 „ DHIRENDRANATH CHAKRABARTI, PH.D.  
 „ DHIRENDRANATH MUKHERJEE, M.A.  
 „ PRIYABRATA SARKAR, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

*Not more than six questions to be attempted,*

*Question 8 being compulsory*

- How would you test whether a compound is unsaturated or not? 16  
Describe the preparation, properties, and tests of acetylene.

2. How can you obtain a sample of pure ethyl alcohol from cane sugar? 16

Discuss the various principles involved in the change and final purification.

3. What are the characteristic radicles of the different amines? How are they distinguished from each other? 16

Describe the preparation of *one* primary amine in the pure state.

4. Give a brief account of the chief products of distillation of coal-tar and state their uses. 16

5. How would you demonstrate that the six hydrogen atoms of benzene are of equal value? 16

6. Explain fully what you understand by osmotic pressure. 16

At 10°C. the osmotic pressure of an aqueous solution of urea is 500 mm. of mercury. The solution is diluted and the temperature is raised to 25°C., when the osmotic pressure is found to be 105.3 mm. Determine the extent of dilution.

7. How does oxalic acid occur in nature? How is it prepared on a large scale? Deduce its constitutional formula. 16

8. 0.15 gm. of a monoacid base gave 0.383 gm  $\text{CO}_2$  and 0.116 gm.  $\text{H}_2\text{O}$ . 20

0.22 gm. gave 11.00 c.c. nitrogen at N. T. P.

0.33 gm. of its platinochloride gave on ignition 0.075 gm platinum.

Determine its molecular formula.

$$\text{Pt} = 195, \text{Cl} = 35.5$$

## SECOND PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Any six questions carry full marks*

1. Write a note on what you understand by chemical valences and distinguish between different types of valence. Give illustrations.

2. What are the oxidizing capacities of (a) potassium permanganate in (i) acid, and (ii) alkaline solutions; (b) potassium dichromate in acid solution? Give complete equations. Explain the reactions in terms of the electrical state of the manganese or chromium atom.

3. Name the important ores of copper. How is the metal extracted and refined? State its uses.

4. Describe *two* processes with relevant details of manufacturing chlorine.

5. Describe the preparation of the following substances in a pure state :—(a) sodium chloride, (b) a solution of sodium hydroxide, (c) water. What are the sources of these substances and the impurities in common samples?

6. Write a note on the methods which have been used in determining molecular weights.

7. Enumerate the oxyacids of sulphur and indicate the conditions for their preparation.

8. How are the following prepared on a commercial scale :—(a) bleaching powder, (b) calomel, (c) chlorine, (d) oxygen?

## BOTANY—HONOURS

Paper-Setters— (Pass & Hons.)	{	PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc.,	B.Sc.,
		„ S. P. AGHARKAR, M.A., PH.D.	F.R.S.E.
		MR. S. R. KASHYAP, B.A., (CANTAB.).	
		„ P. K. PARIJA.	
		DR. KRISHNADAS BAGCHI, M.A., D.Sc.	
Examiners—	{	„ BIRBAL SAHANY, D.Sc.	
		PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc.,	B.Sc.,
		„	F.R.S.E.
		DR. SAHAYRAM BOSE, PH.D.	
		MR. SURENDRACHANDRA BANERJEE, M.A., B.Sc.,	B.Sc.,
			F.L.S.
		PROF. S. P. AGHARKAR, M.A., PH.D.	

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Illustrate your answers by suitable sketches wherever necessary*

*Answer any FIVE questions*

*All questions carry equal marks*

1. Write short notes on any *five* of the following :—meiosis, velamen, mycorrhiza, Puccinophores, cyathium, cleistogamy, Allelomorphs.
2. Discuss the morphology of the climbing organs of the Cucurbitaceae, illustrating your answer by examples you may have studied.
3. Give a general account of the development of the embryo sac in the Angiosperms, and discuss the morphology of its various parts.
4. What is ornithophily? Describe the contrivances for this purpose developed in any *two* species you may have studied.
5. Give a general account of the range of floral structure and affinities of *either* Aroidae *or* Euphorbiaceae. Mention the economic or medicinal plants belonging to the family chosen by you, and give their geographical distribution.
6. Enumerate the principal fibre-yielding plants of India. Assign them to their families, mention the parts of India where they are grown, and describe the process of fibre extraction from any *one* of those cultivated in Bengal.
7. Describe the associations of plants found *either* on an Indian seashore, *or* on the banks of an estuary, and mention the adaptations to environment developed in plants belonging to these.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*The figures in the margin indicate full marks*

1. *Either*, Describe the method of sexual reproduction in the *Fucaceae*. 20  
*Or*, Describe the structure and modes of reproduction in the *Volvocaceae*.

2. *Either*, Describe the chief types of fructification in the *Ascomycetes*. 20  
*Or*, Discuss the alleged origin of the *Phycomycetes* from the Green Algae.
3. *Either*, Discuss the influence of an aquatic habit on the structure of the thallus in the *Marchantiales*. 20  
*Or*, Compare and contrast the *Marchantiales* with the *Jungermannales* as regards the form and structure of the gametophyte.
4. *Either*, Discuss the affinities of the *Marsileaceae*. 20  
*Or*, Describe the chief characters and distribution of the following :—*Hymenophyllaceae*, *Gleicheniaceae*, and *Marattiaceae*.
5. *Either*, Compare the life history of a common fern with that of *Selaginella* as regards the chief stages. 20  
*Or*, Describe the structure of the cone and the prothallus of any Indian *Equisetum*, and point out the significance of this genus in the origin of heterospory.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer only FIVE questions*

*The questions are of equal value*

1. Give an account of the influence of temperature on respiration of plants.
2. Explain the relation between the organization of plant structures and transpiration.
3. Give an account of the hygrometric influences on sexual reproduction in plants.
4. What is humus? Describe the properties of humus and explain its influence on soil as regards the fertility of the latter.
5. Give an account of the enzyme activities that take place in the plant body.
6. Discuss the influence of altitude on plant life
7. Give an account of the movement of gases within the plant.

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer Question 1, and any FOUR other questions*

*All questions carry equal marks*

- \*1. Write a short essay on one of the following subjects :—

- (a) The Mutation Theory.
- (b) The role of chromosomes in heredity.
- (c) The evidences of evolution.

\* *Compulsory question.*

2. Give a detailed account of meristems, their distribution, mode of origin structure, and functions.
3. Write what you know of the Bennettitales and their affinities.
4. Place the following genera in their systematic positions, and give sketches to show their distinctive features :—*Sphenophyllum*, *Ginkgo*, *Welwitschia* (= *Tumboa*), *Rhynia*, *Zamia*.
5. Describe in outline the experiments in heredity carried out by Gregor Mendel, and indicate the main results he achieved.
6. Describe the process of fertilization as seen in any member of the Cycadales, and briefly indicate the phylogenetic significance of the facts you describe.
7. Describe the anatomical peculiarities of :—
  - (a) aerial roots ;
  - (b) aquatic roots ;
  - (c) roots of plants living in dry deserts.
8. Enumerate and classify the plants composing a forest of the coal age in either Europe or India.

## BOTANY—PASS

Examiners—{ Mr. GIRIJAPRASANNA MAJUMDAR, M.Sc.  
 ,, KALIPADA BISWAS, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Examples should be given from Indian plants as far as possible*

*Only FIVE questions to be attempted*

*The figures in the margin indicate full marks*

1. Describe fully the morphology of either a mature grain of rice, or that of wheat, in section, and discuss the significance of various structures present therein. 20
2. Describe the difference between insect and windpollinated flowers, and discuss the significance of various modifications therein. 20
3. Describe the formation of a tetrad from pollen-mother-cell, and discuss the significance of chromosome reduction during the process. 20
4. Describe the anatomy of a pine stem and the formation of annual rings, and compare it with that of woody dicotyledons. 20
5. Describe and discuss the origin, structure, and functions of periderm in woody trees. 20
6. Describe the general characters of the family Compositae together with its floral diagram. Discuss the position of this family in the natural system of classification. 20
7. Describe the cultivation of either jute, or the tea plant, referring it to its family, and discuss its economic importance. 20

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer only FIVE questions*

*The figures in the margin indicate full marks*

1. Describe the life-history of an heteroecious fungus you have studied. 20
2. What do you understand by transpiration current? Give an account of the forces which keep it up. 20
3. Describe the various modes of asexual reproduction in the cryptogams you have studied. 20
4. Give a comparative account of the sporophytes of the liverworts and mosses, and point out the line of advancement. 20
5. Classify plants according to their mode of nutrition, and describe the characteristics of each. Give examples in each case. 20
6. What do you understand by respiration in plants? What is its value to the organism? 20
7. Write an essay on the effect of water on plants. 20

## PHYSIOLOGY—HONOURS

SIR NILRATAN SIRCAR, Kt., M.A., M.D., LL.D.,  
D.C.L.

*Paper-Setters—*  
(*Pass & Hons.*)

RAI BAHADUR DR. UPENDRANATH BRAHMACHARI, M.A., M.D., PH.D.
LT.-COL. A. C. MACGILCHRIST, I.M.S.
PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.
DR. BIJALIBIHARI SARKAR, D.Sc.
DR. GIRINDRASEKHAR BOSE, D.Sc., M.B.

PROF. SUBODHCHANDRA MAHALANOBIS, B.Sc.,  
F.R.S.E.

*Examiners—* { RAI SATISCHANDRA BANERJEE BAHADUR, I.M.S.  
MR. NIBARANCHANDRA BHATTACHARYYA, M.A.  
DR. BIJALIBIHARI SARKAR, D.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FOUR questions*

*The questions are of equal value*

1. Discuss the relations of the nucleus to the cytoplasm.
2. Describe the physical structure of protoplasm, and discuss the relative merits of the different theories of protoplasmic structure.

3. Describe the mechanism of conduction of muscular excitation in the mammalian heart.
  4. What do you know of the endocardiac pressure? How is it measured?
  5. Describe the mechanism of the chemical regulation of the respiratory movements.
- 

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Not more than FIVE questions are to be attempted*

*All questions carry equal marks*

1. Describe the mechanism of secretion of saliva. Write what you know about the energy involved in the act of secretion of saliva.
2. Give a detailed account of the movements of the stomach.
3. Write what you know about the fate of the aminoacids after absorption in the intestine.
4. Discuss how the renal functions are adapted to the needs of the body as a whole.
5. Write short notes on :—
  - (a) The regulation of heat-loss by the skin.
  - (b) Pancreatic glycosuria.
  - (c) Urinary pigments.
6. Discuss the different conditions which set in, due to the absence of the different vitamins in the food.

What is the relation between vitamin D and ultraviolet light?

---

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer only FOUR questions*

*The questions are of equal value*

1. Describe the influence of the thyroid gland on metabolism and growth.
  2. Discuss the inter-relation between the various endocrine organs.
  3. Explain the modern method of measurement of excitability of tissues.
  4. Discuss the nature of the nerve impulse.
  5. Give an account of the means of control of carbohydrate metabolism.
  6. What is basal metabolism ? Discuss its physiological significance.
-



## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer only FOUR questions*

*The questions are of equal value*

1. What are the connexions of the *red nucleus* ? Discuss its functions.
  2. What are the *basal ganglia* ? Discuss briefly their functions.
  3. Describe the *claustrum*. Give its relationships. What important fibres lie superficial to it ?
  4. Describe the course of the *optic nerve* fibres from the optic disk backwards. What are the connexions and functions of the *anterior corpora quadrigemina* as regards these fibres ?
  5. Describe the foetal circulation. What changes occur after birth ?
- 

## PHYSIOLOGY—PASS

Examiners— ) MR. MANMATHANATH BANERJEE, M.Sc.  
 ,, NARENDRA MOHAN BASU, M.Sc.  
 ,, SATINDRA KUMAR SEN, B.Sc., M.B., D.P.H.  
 ,, RUDRENDRA KUMAR PAL, M.Sc., M.B.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Discuss the views which have been put forward to explain the secretion of urine by the kidneys.
  2. Describe the transport of carbon dioxide from the active tissues to the lungs.
  3. Write what you know about the composition of blood, mentioning the different cellular elements found in it.
  4. Describe the source and formation of uric acid found in urine.
  5. Describe the factors concerned in the regulation of body temperature in man.
  6. What is 'blood pressure' ? How is it maintained ? Describe the factors which modify it.
  7. Write short notes on :—
    - (a) Auricular fibrillation.
    - (b) Electro-Cardiogram.
    - (c) Tidal air.
    - (d) Protopathic sensation.
-

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions are to be attempted*

*The questions are of equal value*

1. What are the main points of difference (both structural and functional) between a voluntary and an involuntary muscle ?
2. Give a brief account of the autonomic nervous system.
3. What are the factors which must be taken into account in recommending the proper diet for an individual ?
4. Discuss the role of the semicircular canals in the maintenance of equilibrium.
5. Describe briefly the method of studying metabolism.
6. Describe the changes that take place in a muscle during contraction.
7. Write what you know about the influence of the internal secretion of the Islets of Langerhans on carbohydrate metabolism.

## GEOLOGY—HONOURS

*Paper-Setters—*  
(*Pass & Hons.*)

{	MR. D. N. WADIA.
	DR. A. M. HERON, D.Sc.
	MR. K. K. MATHUR
	„ S. L. BISWAS, M.A.

Examiners— { MR. HEMCHANDRA DASGUPTA, M.A., F.G.S.  
                  " SARATLAL BISWAS, M.A.  
                  DR. A. M. HERON, D.Sc., F.G.S., F.R.G.S., F.R.S.E.  
                  " M. S. KRISHNAN, M.A., Ph.D., A.R.C.S.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer FIVE questions—at least TWO from each group*

*The figures in the margin indicate full marks*

### GROUP A

- |   |    |
|---|----|
| 1. Describe the processes of the formation of ore-deposits by pneumatolysis. Give examples.   | 20 |
| 2. What do you know of—placers, gossan, schlieren, and bog iron ores ?  | 20 |
| 3. Give a brief account of the gem stones found in the Indian Empire.   | 20 |
| 4. Describe the mode of occurrence and distribution in India of each of the following :—bauxite, muscovite, petroleum, and gold. Give an account of their uses. | 20 |

## GROUP B

5. Explain clearly the actions of the various processes that bring about the disintegration of rocks. 20
6. Give an account of the evidences that indicate (a) a past glacial climate, and (b) a past tropical climate. Cite Indian examples to illustrate your answer. 20
7. Write an essay on the interior of the earth. 20
8. Write notes on—*isostasy*, *diastrophism*, *iso-seismal lines*, *rejuvenation of rivers*, and *canyon*. 20

## SECOND PAPER

## MINERALOGY AND PETROLOGY

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer FIVE questions only*

*The figures in the margin indicate full marks*

1. Give a scheme of classification of the sedimentary rocks, pointing out clearly the criteria on which your classification is based. 20
2. Write notes on the origin of the following :— 20
  - (a) concentric rings in oolites, (b) zoning in feldspars, (c) pleochroic haloes, and (d) perthitic texture.
3. Describe the chemical nature and textural characters of the following rocks :—(a) *albite*, (b) *andesite*, (c) *khondalite*, (d) *limburgite*, and (e) *greywacke*. 30
4. State the chemical nature, mode of occurrence, and paragenesis of the following minerals :—*topaz*, *sodalite*, *gypsum*, *monazite*, and *axinite*. 20
5. Explain the relation between the thickness of a mineral plate and the order of polarization colours observed under crossed nicols. 20
6. Describe the chemical composition and physical properties of the following minerals :—*pistacite*, *zircon*, *dolomite*, *apatite*, and *microcline*. 20
7. Write explanatory notes on the following :— 20
  - pole of a face, optic normal, *Airy's spiral*, and *hemimorphism*.
8. What is meant by *contact metamorphism* ? Indicate the changes that will be noticed in the contact zone of a mass of impure limestone with an igneous intrusion. 20

## THIRD PAPER

## PALAEOLOGY

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any FIVE questions out of these carry full marks*

*The questions are of equal value*

1. State what you know concerning the general characters of the Gondwana flora in India
2. Give a succinct account of either the Trilobites, or Palaeozoic Cephalopods.
3. Describe, with sketches, the main characters of any six of the following fossil genera :—*Lepidocychna*, *Isastraea*, *Clymenia*, *Archegosaurus*, *Acidaspis*, *Perisphinctes*, *Batissa*, *Gonioglyptus*, *Cladophlebis*, *Hydasphtherium*,  
Give their approximate stratigraphic position and range in time.
4. Give a comparison of the *Productus* fauna of the Salt Range with the Permo-Carboniferous fauna of the North-West and Central Himalaya.
5. Classify the marine tertiaries of India, giving their distribution in the various provinces of India.
6. Describe a typical Echinoid test, and classify the Echinoidea, assigning well-known Indian genera to their respective position.
7. Write a note on the main palaeontological unconformities met with in the Indian region.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions to be answered*

*The figures in the margin indicate full marks*

1. Name the horizons characterized by the following fossils, and state to which branch of the animal or vegetable kingdom each belongs :—*Avicula contorta*, *Colossochelys atlas*, *Productus cora*, *Inoceramus gracilis*, *Trigonia ventricosa*, *Assilina granulosa*, *Belemnites sulcatus*, *Sabal major*, *Athyris Roysii*, *Danaeopsis hughesi*. 20
2. Give a short account of the Cuddapah and Kurnool series. 20
3. Describe the formations found in Spiti below the Permian. 20
4. State the geological horizon, type locality, and characteristic fossils of the following formations :—*Umia* beds, Subathu stage, Kamthi series, Neobolus beds, Ariyalur stage. 20
5. State what you know of tertiary igneous activity in extra-Peninsular India. 20
6. Describe briefly the tertiary sedimentary rocks of Burma. 20
7. Write a short essay on the Gondwana land continent and its fauna and flora. 20

## GEOLOGY—PASS

*Examiners*—{ MR. HEMCHANDRA DASGUPTA, M.A., F.G.S.  
DR. MANMOHAN CHATTERJEE, B.Sc, PH.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer six questions only*

*The figures in the margin indicate full marks*

1. Enumerate the minerals that form the chief ores of manganese, 16  
and give the distinctive characters of each.
2. Give an account of the uses of—limestone, muscovite, galena, 16  
wolfram, diamond, quartz, petroleum, and talc.
3. What do you understand by double refraction? Explain clearly 16  
the construction of a Nicol prism.
4. Describe a scheme of classification of minerals, stating clearly 18  
the principle on which your scheme is based.
5. What do you know of—isomorphism, pleochroism, plane of sym- 16  
metry, axial ratio and twins?
6. Describe the geology of an area you have personally visited, 16  
giving particularly an account of the rocks occurring there.
7. Give a summarized account of the plutonic and the extrusive 16  
rocks that contain more than 66 per cent. of silica.
8. Give an account of the evidences by which an igneous rock 16  
is distinguished from a sedimentary rock in the field.
9. Write short notes on :—crypto-crystalline, xenocryst, pneumato- 18  
lysis, dynamo-metamorphism, regur, and fundamental complex.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FIVE questions to be answered*

*The figures in the margin indicate full marks*

1. Describe the situation of the working coal-fields of Peninsular 20  
India, drawing a sketch-map. In what formations are the actual  
coal-seams found?
2. What is the relationship of the Bagh and Lameta beds to 20  
each other and to the overlying and underlying formations? Mention  
their age.
3. Describe with sketches—recumbent fold, step-fault, canyon, iso- 20  
cline, outlier, synclinalorium, delta, boulderclay, nappe, surface creep.
4. Describe briefly the various kinds and forms of solid material 20  
thrown out by volcanoes.

5. State the geological horizons in India to which 'these' fossils belong :—*Plesiosaurus Indica*, *Ostraea latimarginata*, *Cardita beaumonti*, *Calceola sandalina*, *Glossocopterus Indica*, *Physa prirsepui*, *Stegodon ganesa*, *Spirifer rajah*, *Nummulites planulatus*, *Nautilus danicus*. 20

6. Indicate to what groups of animals or plants the fossils mentioned in Question 5 belong. 20

7. State the age, locality, and constitution of the following formations :—Rajmahal series, Charnockite series, Muth quartzite, Kurnool series, Talchir stage, Murree stage, Regur. 20

### ZOOLOGY—HONOURS

Paper-Setters— (Pass & Hons.)	{	DR. EKENDRANATH GHOSH, M.Sc., M.D., F.Z.S.
		„ GEORGE MATHAI.
		„ KARAMNARAIN BAHL, D.Sc.
		MR. D. R. BHATTACHARYYA.
		LT.-COL. R. B. SEYMOUR-SEWELL, M.A., I.M.S., F.Z.S.
Examiners—	{	DR. H. S. PURETHI, D.Sc.
		„ HIMADRIKUMAR MOOKERJEE, D.Sc.
		„ BAINI PRASAD, D.Sc.
		„ H. N. RAY, M.Sc., Ph.D.

#### FIRST PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answers should be illustrated with suitable diagrams*

*Only FOUR questions should be attempted*

*The figures in the margin indicate full marks*

1. Give a general account of the Foraminifera, describing fully the life-history of one member of the class. 25
2. Write a short essay on the adaptations of the Mollusca to different habitats and modes of life. 25
3. Discuss the affinities of the Ctenophora. 25
4. Give an account of the order Trematoda and of its main sub-orders. Add a note on the affinities of Trematoda with the Turbellaria. 25
5. Give an account of the distinguishing features of the two main divisions of the Echinodermata, choosing *Asterias* as the type of one division and *Antedon* as the type of the other. 25
6. Give an account of the life-history of *Sacculina*, and show what effect the parasitism has on parasite and host. 25
7. How would you distinguish between nephridia and coelomoducts? Give an account of the chief modifications of these organs met with amongst the Annelida. 25

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FOUR questions to be attempted*

*The questions are of equal value*

1. What do you know of the evolution of the Chordata?
  2. Describe the metamorphosis of an Ascidian. What light does it throw on its chordate affinities?
  3. Discuss the skeletal peculiarities of the Teleostei.
  4. What are the characteristics of Rhyncho-cephalia? How does it differ from the lizards?
  5. What structural modifications are found in mammals which have developed a so-called 'wing' with reference to their aerial life?
- 

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Not more than FIVE questions are to be attempted*

*The questions are of equal value*

1. Give a detailed account of the part played by the centrosome in cell-division.
  2. Clearly explain the phenomenon of sex-linked inheritance, and discuss its significance.
  3. Give a concise account of the histology of nervous tissue.
  4. Briefly describe the formation of the heart and its vessels in the Chick.
  5. With reference to any particular example, explain the formation of Blastocoel, Enteron, Coelom, and Blood spaces, and discuss their relationships.
  6. Briefly describe the embryonic development of the Mosquito.
  7. Write short notes on:—Golgi bodies, Placenta, Spermatocyte, Mesenchyme, Neurenteric canal, Polar bodies.
- 

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

**Write an essay on any one of the following subjects :—**

- (a) Symbiosis and Parasitism.
  - (b) The aquatic fauna of a deltaic area.
  - (c) Social instincts in the Invertebrata.
  - (d) Metamorphosis.
-

## ZOOLOGY—PASS

Examiners—{ DR. EKENDRANATH GHOSH, M.Sc., M.D.  
MR. DURGADAS MUKHERJEE, M.Sc.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*All questions carry equal marks*

*Only FIVE questions to be attempted*

1. Compare the bodily structure of a sponge with that of a coelenterate.
  2. What are the principal characters of Platyhelminthes?
  3. What are the peculiarities of an Arthropod eye?
  4. What are the principal types of larvae appearing in the metamorphosis of Mollusca?
  5. Describe the water-vascular system of an Echinoderm.
  6. Compare the body-cavities of the principal divisions of the Invertebrata.
  7. What are the various larval forms of Echinodermata ?
- 

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer FIVE questions only*

*All questions carry equal marks*

1. In what ways do the Darwinian and Lamarckian explanations of the causes of evolution differ? Criticize the evidence in favour of either of them.
  2. State clearly what you understand by geological distribution of animals and mention its importance in the study of Zoology.
  3. Describe the development of a Tunicate, pointing out its bearing on the relationship of the Chordates.
  4. Trace the evolution of the shoulder girdle in the Vertebrate series.
  5. Give an account of the circulatory system of a lizard, and compare it with that of an Amphibian and a Mammal.
  6. How is flight effected in a bird and in a bat? Compare the organs of flight in these two cases.
  7. What are the characteristic feature of the Monotremata? How far may that group be considered to be intermediate between reptiles and Therian mammals?
  8. Give an account of the development, structure, and taxonomic value of the teeth in the Mammalia.
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## ANTHROPOLOGY—HONOURS

Paper-Setters— (Pass & Hons.)	{	RAI BAHADUR SARATCHANDRA RAY, M.A., B.L.
		DR. BIRAJASANKAR GUHA, M.A., PH.D.
Examiners—	{	LT.-COL. R. B. S. SEWELL, M.A., I.M.S., F.Z.S., F.L.S.
		MR. KSHITISPRASAD CHATTERJEE, M.A.
	{	RAI BAHADUR SARATCHANDRA RAY, M.A., B.L.
		DR. J. H. HUTTON, D.Sc.
		RAO BAHADUR L. K. ANANTHAKRISHNA IYER, B.A., L.T.
		DR. PANCHANAN MITRA.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FOUR questions to be attempted*

*All questions carry equal marks*

1. Discuss the probable site of the origin of the human race and the geographical and other external conditions that may have caused its evolution,
2. Give a full account of the skeletal peculiarities of *Homo neanderthalensis*.
3. At what geological epoch did man first appear? Give as fully as possible the evidence in favour of your view.
4. Give an account of the various types of prehistoric races of man or nearly allied anthropoids that have been discovered in Asia.
5. Discuss the cranial characters of the race or races associated with Aurignacian culture in Europe.
6. Discuss the first appearance of brachycephaly in Europe, and trace the source and route by which a race with this type of skull may have migrated.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FOUR questions are to be answered*

*All questions carry equal marks*

1. To what extent can 'skin-colour' be regarded as a primary racial test? To what different factors would you attribute the absence of pigment among the North-European and of increased pigment among the Negroid races?
2. What artificial deformations of skull do you know of, and in what races do they occur?
3. Describe the characteristics of the Hamitic race. Is it purely a cultural designation or are there special somatic characters associated with it?
4. Can you divide India into separate zones of culture? What are the main differences between Northern and Southern India from the cultural standpoint?

5. How far has the racial history of India been influenced by race movements in Central Asia?

6. Can China be regarded racially as a homogeneous unit? If not, describe the main types found in China.

### THIRD PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Answer any FOUR questions*

*The questions are of equal value*

1. Describe the Upper Palaeolithic period in Europe, and show on a map of Europe the geographic distribution of Solutrean culture.

2. (a) Describe the various stages in the development of Palaeolithic art in Europe.

(b) Give an account of prehistoric Indian cave-paintings.

3. Describe the racial types of Palaeolithic times in Europe.

4. Give an account of various kinds of primitive habitations found among the different primitive tribes of India.

5. Give an account of the different classes of Indian megaliths, prehistoric and modern, and show their distribution on a map

6. Write short notes on :—lake dwellings, scarification, cross-bows, pellet-bows, blow-tubes.

### FOURTH PAPER

*Candidates are required to give their answers in their own words as far as practicable*

*Only FIVE questions are to be attempted*

*The figures in the margin indicate full marks*

1. Write a short note on dual organization, indicating its distribution 20 in India. Discuss its probable origin.

2. Discuss the value of the ceremonial associated with marriage, in 20 the study of (a) culture analysis, (b) magico-religious beliefs. Give Indian examples.

3. What is cross-cousin marriage? What are its different modes and 20 to what extent is it current? Discuss the origin of the institution.

4. Write a short essay on animism, indicating its survivals in the 20 higher forms of religion. Give Indian examples.

5. What is the basic idea underlying punishment among primitive 20 people? Compare it with the modern view.

6. Indicate the different modes of judging the innocence or guilt of 20 an accused person among primitive people.

7. Discuss the probable origin of the (a) common, and (b) individual 20 holding of land in village communities. Give Indian examples.

## ANTHROPOLOGY—PASS

Examiners—{ DR. BIRAJASANKAR GUHA, M.A., PH.D. (HARVARD).  
MR. PANCHANAN MITRA, M.A., PH.D.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only FOUR questions to be attempted*

*All questions carry equal marks*

1. Discuss the relationship of Man to the other Primates.
2. Describe the present-day distribution of the Negrito race in Asia, and discuss the causes that may account for it.
3. Give a list of the main human races that exist at the present day, and compare and contrast any two.
4. Give a full account of the physical characters of the Australian Aboriginal. To what prehistoric race is he most nearly allied?
5. Discuss the bases on which the Anthropological classification is founded. To what extent can language be regarded as a test of racial affinity?
6. Describe the chief somatological characters of the Mongolian race. In what regions in India do men of this type occur at the present day?

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only SIX questions are to be attempted*

*All the questions are of equal value*

1. Write a short note on the racial types in the neolithic and the metal ages in Europe, indicating the cultures, if any, associated with each type.
2. Write a note on the cave-art of the palaeolithic age in Europe. Do you know of any modern primitive people with a comparable art?
3. Discuss the effect of the domestication of plants on the social organization of a people.
4. What is terraced cultivation, and how did it originate? Indicate its distribution in India.
5. Define (a) descent, (b) inheritance, and (c) succession. Indicate clearly the nature of these in a society observing mother-right.
6. What is dual organization? Discuss its probable origin.
7. Define (a) magic, and (b) religion. Can you suggest any test for distinguishing the two? State your views on the subject, giving examples.
8. Discuss the value of folk-lore in the study of culture contact and cultural evolution. Illustrate your argument with examples.
9. Write a short note on totemism, briefly discussing the different views expressed with regard to it.

## EXPERIMENTAL PSYCHOLOGY—HONOURS

Examiners—{ PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
 DR. NARENDRANATH SENGUPTA, M.A., PH.D.  
 „ GIRINDRASEKHAR BOSE, D.Sc., M.B.  
 MR. HARIPADA MAITI, M.A.

## FIRST PAPER

*Candidates are required to give their answers in their own words  
 as far as practicable*

*Answer any six questions*

*All questions are of equal value*

1. *Either*, Explain and examine the different theories of visual space perception.

*Or*, Trace the genesis of the affective elements of consciousness. Explain why consciousness is frequently neutrally toned. Attempt a general theory of affective processes, and examine a few typical instances of affective consciousness to test the adequacy of the theory.

2. What are preparatory reactions? What is delayed reaction? What do the preparatory reactions accomplish? What is a tendency to reaction in terms of nerve action?

3. *Either*, Fully discuss the question as to what are the incentives to reproduction and liability of reproduction.

*Or*, What do you understand by 'expressive movements'? What are the different theories of these movements? Examine them, and state your own theory with reasons to support it.

4. Write notes on—synapse, Müller-Lyer illusion, local sign, empathy, and ideo-motor action.

5. *Either*, 'As stimuli for attention, some objects are much more effective than others.' What are these more effective objects? State fully the nature of the motor reaction in attention and the laws of attention.

*Or*, 'It is only by interrogating consciousness that we get any light upon it.' Fully develop the thought embodied in this sentence, pointing out the main questions which arise in this connexion, the dangers in the way of obtaining correct answers to the questions by interrogating consciousness, and the results obtained.

6. Indicate the relation of belief and knowledge. Give a psychological analysis of belief. What are the grounds or sources of belief? Mention some recent theories which depreciate the importance of intellect and knowledge (in connexion with belief) as guides of action, and examine them.

7. 'We prefer to adopt Wundt's view, which considers apperception and will as ultimately one and the same function.' Fully explain this view, bringing out all its implications, and examine it.

8. *Either*, Give an account of the structuralist, the hormetic and the Gestalt schools of psychology, and examine their main tenets.

*Or*, Trace the history of the German psychology of the early nineteenth century.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FOUR questions*

*The questions are of equal value*

1. What are the marks of behaviour? Examine the so-called instinctive behaviour of insects.
2. Give an account of tropisms, commenting on their mechanistic explanations.
  - . Discuss the relations of emotions to instincts.
4. Describe a simple case of learning by experience, and discuss its neural basis.
5. Criticize the various views of the will as a positive and as a negative function.
6. Describe the characteristics of the reflex processes of the spinal level.

## THIRD PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Only six questions to be answered*

*The questions are of equal value*

1. Describe the characteristics of protopathic and epicritic sensibility. State the main points of Head and Rivers' experiment.
2. What are the zones of retinal sensibility? How does Ladd-Franklin account for them?
3. Write notes on three of the following:—tonal islands, interval of indifference, eidetic imagery, Henning's classification of odours, 'stimulus error.'
4. What are conditioned reflexes? Discuss their significance for psychology.
5. Write a comparative estimate of the learning saving, and scoring methods.
6. Discuss the value of ergography as a method for the determination of mental fatigue.
7. Describe one of the following experiments, and discuss its theory:—range of attention, fluctuation of attention, temporal displacement of the impression attended to.
8. Distinguish between (a) sensory and muscular reaction, (b) choice and discriminative reaction.

## FOURTH PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Any six questions may be attempted*

*The questions are of equal value*

1. Describe briefly what is meant by psychological parallelism.
2. Discuss the significance of applying statistical methods in psychological experiments.
3. Characterize and distinguish between reflex, impulsive, and voluntary actions. How will you explain psychologically the cases of persons who know the right but do the wrong?
4. Describe accurately the physiological accompaniment of a few chief emotions.
5. Explain Weber's Law and determine the extent of its application, and consider the differences connected with it.
6. Define memory. What are the conditions of good memory? What advice would you give to a person who complains of poor memory?
7. What do you understand by 'Local signature'? What is their role in the development of space perception?
8. What are the most important differences between organic sensations and the sensations of special senses?

## EXPERIMENTAL PSYCHOLOGY—PASS

*Paper-Setters*—{ DR. GIRINDRASEKHAR BOSE, D.Sc., M.B.  
MR. HARIDAS BHATTACHARYYA, M.A.

*Examiners*—{ MR. HARIDAS BHATTACHARYYA, M.A.  
DR. SUHRIDCHANDRA MITRA, M.A. (Cal.), Ph.D.

## FIRST PAPER

## GENERAL PSYCHOLOGY

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any FIVE questions*

*The questions are of equal value*

1. Give a diagrammatic sketch of the human eye, and point out the functions of its parts in relation to vision.
2. Write a short essay on kinaesthetic sensations and their contributions to intellectual and volitional life.
3. Distinguish between instincts and impulses, giving illustrations.  
What theories have been advanced to explain the inhibition of impulses?
4. Explain any five of the following with illustrations :—behaviour pattern, empathy, synaesthesia, ejection, fusion, conditioned reflex, double vision, complex, material self.

5. Discuss the nature of an image and its place in the evolution of mental life.
6. Discuss the relation between idea and will with appropriate illustrations.
7. Expound the laws of feeling and illustrate them.
8. Critically estimate the value of the resonance theory of emotion, as upheld by James.
9. Describe and illustrate the law of contiguous association, and indicate its relation to the law of similarity.
10. How are dreams caused? Describe any one recent theory of dream interpretation.

## SECOND PAPER

*Candidates are required to give their answers in their own words  
as far as practicable*

*Answer any six questions*

*The questions are of equal value*

1. What is field of vision? How would you determine the field of vision for a particular colour?
2. What do you understand by the terms (a) hue, (b) tint, and (c) chroma? Describe their physical correlates.
3. What are the different cutaneous sensations? What are their respective end organs, and how do you find out their distribution on your subject's skin?
4. How would you prove the truth of Weber's Law? What is its psychological significance?
5. Describe the different methods for the investigation of affection, and criticize them.
6. Briefly describe the conditions and precautions that you would observe in determining the sensory reaction time of your subject by means of the vernier chronoscope.
7. How would you measure visual memory? Which method would you prefer, and why?
8. How does a psychological experiment differ from a physical or a physiological one?

## B. Com. Examination

1932

### HINDI COMPOSITION

*Paper-Setter and Examiner—MR. NALINIMOHAN SANYAL, M. A.*

*The figures in the margin indicate full marks*

1. Translate two of the following extracts into English :—

24

(a) बम्बई के कपड़े का धन्धा और रूई का व्यवसाय एक दम बिगड़ी हालत में नहीं है। बम्बई में दो अड़ाई लाख देशी कपड़ों की गाँठों के बिक जाने से यह प्रकट होता है कि वहिष्कार-आन्दोलन से इस राष्ट्रीय धन्धे की रक्षा हुई है। सभी मिलों के माल की अच्छी खपत है। ताता का लोहे का सामान, दियासलाई, साबुन और सिगरेट आदि के देशी कारखानों को इस आन्दोलन से बल मिल गया है। यदि केवल वहिष्कार हो और उसके साथ खदेशी माल की पैदावार बढ़ाने का रचनात्मक कार्य न हो तो वह औद्योगिक क्रान्ति असफल होती है। किन्तु देश इस समय भली भाँति सजग है।

(b) अमेरिका में कलों का जितना व्यवहार होता है, उतना योरप में वा और किसी भी दूसरे देश में नहीं होता। यही कारण है कि एक अमेरिकन कारीगर या मज़दूर अपने समकक्ष योरप के किसी भी देश के कारीगर या मज़दूर की अपेक्षा तिगुना उपाजन कर सकता है। साल भर में इंग्लैंड, जर्मनी, इटली और बेलजियम मिलकर जितना पण्य-द्रव्य उत्पन्न करते हैं, अकेले अमेरिका उसका दुगुना पैदा करता है। कुछ घंटे परिश्रम करने से ही एक अमेरिकन मज़दूर जितनी मज़दूरी प्राप्त करता है, उसे देखकर उसके साथी योरोपियन मज़दूर को चकित हो जाना पड़ता है।

(c) भारतवर्ष की तरह रूस भी कृषि-प्रधान देश है, किन्तु जब से वहाँ नूतन शासन-प्रणाली की स्थापना हुई है और आरम्भिक



काल के बाद पुनः शान्ति की स्थापना हुई है, तब से वहाँ के उद्योग व्यवसायों को भी समुन्नत बनाने की चेष्टा की जा रही है। सन १९२८ में पाँच वर्षों के लिये जो कार्यक्रम सामने रखा गया था, उसका उद्देश्य सोवियट रूस को आर्थिक दृष्टि से पूर्णतया स्वावलम्बी बनाना है। पिछले दो वर्षों में इस में जो सफलता प्राप्त हुई है, उससे इस बात की पूरी आशा हो रही है कि यदि कोई विघ्न-बाधा उपस्थित न हुई तो पाँच वर्ष का कार्यक्रम सन्तोष-जनक रीति से पूरा किया जा सकेगा।

2. Translate *two* of the following into Hindi :—

24

(a) The work of a coal-miner is very dangerous. Gas comes from the coal, and may collect in parts of the mine. If naked lights are carried, there would be an explosion. Each collier therefore carries what is called a safety lamp. This is made in such a way that gas cannot reach the flame.

(b) A provision shop is kept by Thomas Jones. It stands in Morris Road, and it is the largest shop in the town of Greenstreet. Mr. Jones sells tea, coffee, flour, butter, sugar, spices, currants, raisins, almonds, and many other useful things. On his counter there are scales, a ball of string, and a pair of scissors.

(c) Now the greater part of the cotton grown in India is sent out to other countries for spinning and weaving. They in their turn send us the finished products which we buy from them again. In England, Japan and America there are many big mills to spin and weave our raw cotton for us.

3. Answer the following questions in Hindi complete sentences :—

16

(a) When did you get up from bed this morning?

(b) State all that you did till breakfast

(c) Name the raw materials from which your breakfast was prepared

(d) State the processes by which the breakfast was prepared from the raw materials

(e) Name the articles of clothing you have now on your person.

(f) Name the stuffs out of which this dress has been made

(g) Name the raw materials that were used for making the stuffs

(h) State the process of converting the raw materials into the stuffs for making your dress.

4. Rewrite the following correctly :—

16

काशी का एक छोटा सा मकान में मुन्नी नाम का एक छोटी सी लड़की रहती थी। वह मकान में मुन्नी का बाप और मा भी रहती थी। मुन्नी उसका देह साफ नहीं रखती थी। इस कारण राजा उसे सजा देने के लिये पकड़वा मंगाये। मुन्नी राजा को पूछा, "मैं क्या किया हूँ?" राजा ने बोला "तुम देह साफ क्यों नहीं रखता है?"

5. Write an essay in Hindi on any one of the following subjects :—

20

(a) Discuss wheather the present rate of exchange is detrimental to the interests of India or not.

(b) Discuss the causes that combined to bring about the cheapness of the foodstuffs and other articles of daily consumption in India during the last year and a half.

(c) The unemployment problem in India and its remedy.

## URDU COMPOSITION

Paper-Setter and Examiner—{ SHAMS-UL-ULAMA HIDAYAT HUSAIN  
KHAN BAHADUR, F.A.S.B.

*The figures in the margin indicate full marks*

1. Translate into English :—

25

ادھر امام حسین کو مکہ میں جب مسلم کا خط ملا تو وہ کوفہ چلنے کے لئے تیار ہو گئے۔ خیبر خواہوں نے ان کو منع کرنا شروع کیا۔ سب سے پہلے عبد الرحمن بن حارث نے پھر حضرت عبد اللہ بن عباس نے۔ مگر امام حسین نے ان کے کسی مشورہ کو قبول نہیں فرمایا اور مع اہل و عیال کوفہ روانہ ہو گئے۔ راستہ میں عبد اللہ بن جعفر کا قاصد مدینہ سے دوڑتا ہوا پہنچا اور ان کا خط دیا۔ انہوں نے لکھا تھا کہ آپ یلت جائیں۔ اسی کے ساتھ والی مدینہ کا خط بھی منسلک تھا کہ آپ مدینہ آکر رہیں آپ کو امان ہے۔ لیکن امام حسین نے واپسی سے انکار کیا۔ چند منزلوں کے بعد عبد اللہ بن مطیع ملے جو عراق سے مکہ آرہے تھے۔ انہوں نے بھی سمجھایا اور کہا کہ آپ واپس چلئے \*

2. Translate into Urdu :—

35

It is not generally known, perhaps, that in Islamic art the penman occupies a far higher place than the painter. Islam prohibited the drawing of living forms and condemned to Hell those who were guilty of making pictures of animate objects. This injunction was laid down to prevent the spread of idolatry. The art of calligraphy, on the other hand, obtained a religious sanction. 'Beauty of handwriting is incumbent upon you,' declared the Prophet of Islam. Thus the profession of the calligrapher, chiefly engaged in copying the Koran, became one of honour and dignity. He occupied a position of rank at the courts of kings and princes, and was paid handsomely for his labour.

3. Explain in Urdu :—

15

(a) ہنر مستغنی اس سے ہے کہ قدر افزا میسر ہو

شناساگر نہو تیرا کوئی پر تو تو جوہر ہو

(b) اپنی نظر میں ہیچ ہے سارے جہاں کی سیر

دل خوش نہو تو کس کا تماشا کہاں کی سیر

4. Write an essay on one of the following subjects :—

25

(i) The methods to be adopted for developing manufacturing industries in India.

(ii) Protection, its advantages, and disadvantages, with special reference to India.

(iii) سدا ایک ہی رخ نہیں چلتی کشتی

چلر تم ادھر کو ہوا جدھر کی

## FRENCH COMPOSITION

Paper-Setter—DR. PROBODH CHANDRA BAGCHI

Examiner—MR. N. N. CHANDRA, M.A.

*The figures in the margin indicate full marks*

*Candidates are required to give their answers in their own words as far as practicable*

1. Translate into English :—

40

(a) Mon père, qui croyait à la vertu des grandes villes pour former l'intelligence, avait recommandé à ma mère de m'envoyer à Paris suivre ces études de droit, qui semblent à nos familles le complément indispensable d'une bonne éducation. Par respect pour la volonté du mort, mais bien à contre-cœur, je vous le jure, ma mère se résigna donc à me laisser partir là-bas. Quel malaise, quelle solitude dans cette existence nouvelle, dans cette ville étrangère, où l'on est plus impressionné par la médiocrité qui vous entoure que par un luxe, une beauté que l'on sait mal découvrir !

(b) Par le système de la police d'assurance, tous les bagages des voyageurs, aussi bien les petits colis à la main que ceux destinés à l'enregistrement, de même que les vêtements et les objets qu'on porte sur soi, sont couverts pour les montants qui atteignent la somme assurée contre paiement d'une prime de 20 fr. par 1000 fr. de valeur assurée. L'assurance couvre tous les risques, quelle que soit la cause du dommage, même pour les cas de force majeure. Elle n'est cependant pas valable pour les retards de livraison, ni pour les dommages-intérêts.

2. Translate into French :—

20

The jute market has slightly improved. The price of jute now ranges from Rs. 5-12 to Rs. 7, according to quality, per maund of 82 *tollas* a *seer*. In spite of the comparatively high prices, the daily import is much less than that of the previous week. The rise in prices has not given much profit to the growers, the majority of whom have already disposed of their stock owing to great economic crisis. Consequent upon the rise in the price of jute, business generally seems to be improving.

3. Correct the grammatical mistakes in the following :—

10

(a) Ce enfant ne fais rien, disait ma mère.

(b) J'en ai gardias le souvenir d'un homme douce et ennuyé.

(c) J'étais alors sensible et tendre. Tout me parlaient et moi-même je parlais à toutes choses.

(d) Ces pensées venait surtout m'assaillir lorsqu'abandonnant mes amis je revenait au Pradeau.

(e) On me voyait sur tous les routes, parfois même il m'arrivait de ne pas entrer le nuit.

4. Write a short essay in French on—

30

*either.*

(a) The causes of the present depression in trade,

*or,*

(b) The raw products of Bengal.

## GERMAN COMPOSITION

*Paper-Setter*—DR. STELLA KRAMRISCH, D.LITT.

*Examiner*—DR. K. I. GANGULY

*The figures in the margin indicate full marks*

1. Translate into English :—

20

Heinrich hoerte dem frommen Greise mit der groeszten Aufmerksamkeit und mit geruehrttem Herzen zu, und verwandte kein Auge von ihm. Es war unter diesem Gespraechen Nacht geworden, ohne dass der Kleine darauf geachtet hatte. Der Mond, der vorher als ein kleines, kaum bemerkbares Wuelklein am Himmel schwebte, leuchtete jetzt in reinstem Glanze und stand, von unzähligen, hellfunkelnden Sternen umgeben, hoch ueber dem See. Der See glich einem hellen Spiegel und man glaubte darin einen zweiten Himmel mit Mond und Sternen zu entdecken, und in die Unendlichkeit zu blicken. Kein Blaettdchen der Baeume umher regte sich; es herrschte eine feierliche Stille. Ein neues, noch nie empfundenes Gefuehl, das Gefuehl der Andacht, der Anbetung, der Naehes Gottes regte sich in Heinrichs Herzen.

2. Translate into English :—

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Ich bestaetige den richtigen Empfang Ihres w. Briefes vom 10.d.M., in welchem Sie mich zur Begleichung Ihres Guthabens auffordern. Es ist mir leider nicht moeglich, Ihrem Wunsch sofort nachzukommen.

Sie wiesen, dass ich in meinem Geschaefte langen Kredit geben muss, und ich bin dieses Jahr in der Eintreibung von Auszenstehenden groeszeren Schwierigkeiten begegnet als je zuvor. Ich werde Ihnen aber ehestens eine betraechtliche Summe als Anzahlung zukommen lassen und fuer den Restbetrag einen einmonatlichen Wechsel ausstellen.

In der Hoffnung, Sie mit dieser Abmachung einverstanden zu finden, Zeichne ich ergebenst.

3. Translate into German :—

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I hear to-day to my surprise from my bank, that you have not taken up the bill due on the 10th. It would have been your duty to inform me in good time, in order to withdraw the draft. We requested the bank to

present the bill of exchange again on the 15th, and we rely confidently that you will pay it. In case you are short of a part of the sum, we are ready to forward same to you, so that you can honour our draft.

4. Write a few lines in German on any subject of commercial interest. 30

## TAMIL COMPOSITION

*Paper-Setter and Examiner*—RAO BHADUR L. K. ANANTHA  
KRISHNA IYER, B.A., I.T., F.R.A.I.

*The questions are of equal value*

1. Translate into Tamil the following passage:—

It is accepted by all historians that India is the birthplace of the cotton industry of the world. The industry is at least over 3,000 years old in India and reference is made to it in the Rig-Veda and other records written in ancient times. Till only 200 years ago, India supplied cotton and cotton goods to her people at home and numerous customers abroad. Thus, it was India that, for thousands of years clad not only for herself in her celebrated cotton products, but also supplied the European nations of the time with her surplus produce. The manufacture of cotton goods was neglected in Europe till the 18th century, and India supplied a large part of the cloth required by the foreign countries. The history of the manufacture of cotton in India, before the first half of the 19th century, is the history exclusively of hand-spinning and hand-weaving. Although they were both done by hand and not by machinery, the Indian spinners and weavers had reached a very high degree of excellence in the delicacy of the fabrics manufactured by them. The incredibly simple methods of the Indian spinners and weavers stand no comparison to the elaborate mechanical device of modern days. And yet, observed Baines in his 'History of Cotton Manufactures' in 1835, 'Indians have, in all ages, maintained an unapproached and almost incredible perfection in their fabrics of cotton—some of their muslins might be thought the work of fairies of insects rather than that of men.' Taking into consideration the disadvantages of the primitive method of manufacture of the simple and unlettered people who turned out the cloth with the aid of only a few crude tools in their small cottages, it is really a matter of great admiration that our ancestors should have arrived at such an exceedingly high state of proficiency in the delicacy of the fabrics manufactured by them. Muslins were among the early articles of the Indian export trade, and, in spite of the great mechanical advancement made in the cotton industry, the muslins manufactured by the weavers at Dacca, which were known by such names as 'Running Water', 'Evening Dew', and 'Textile Breezes' still remain unsurpassed in fineness.

2. Write an essay in Tamil on one of the following subjects:—

- (1) Primitive village-industries.
- (2) Protection or Free Trade.
- (3) Advantages of international Trade.

## MALAYALAM COMPOSITION

*Paper-Setter—MR. K. ZACHARIAH**Examiner—MR. C. E. ABRAHAM**The figures in the margin indicate full marks*

1. Translate any one of the following passages into idiomatic English :— 20

(a) ഗ്രാമങ്ങളിൽ ചുറ്റി സഞ്ചരിച്ച ശാസ്ത്രീയ കൃഷി തത്വങ്ങളെ പ്രയോഗിക മാതൃകകൾ മൂലം കർഷകന്മാർക്ക് പ്രസ്താവമാക്കി കൊടുത്ത ശോച്യാവസ്ഥയിൻ നിന്നും അവരെ ഇലറിക്കുന്ന തിനയ്ക്കി ശാസ്ത്രീയ അർവ്വസനവും പ്രായോഗിക പരിശീലനവും മൂലം നല്ല യുവാക്കന്മാരെ നിയമിതയുണ്ടായി. അവരുടെ പ്രവർത്തിപദ്ധതികളെ പല പത്രങ്ങളും ആകാംക്ഷയോടു കൂടി കാലാകാലങ്ങളിൽ നിരൂപണം ചെയ്തു കൊണ്ടിരുന്നു. അവർ നാനാ മാതൃകകൾ മൂലം കാഷികാവുന്നതിക്കും തന്മൂലം വൊതു സമ്പത്തികോന്നതിക്കും ഏറെക്കുറെ യന്തിച്ചുവന്നു. ഇങ്ങനെയുള്ള കർഷക പ്രബോധകന്മാരെ എല്ലാ ഗ്രാമങ്ങൾ തോറും നിശ്ചയിച്ചാക്കുന്ന കാലം വൊതു ജനങ്ങൾ പ്രതീക്ഷിച്ചുകൊണ്ടിരുന്നു.

(b) സാമാനങ്ങളുടെ വിലക്കുറവും പണത്തിന്റെ ക്ഷാമവും കൊണ്ടു ജനങ്ങൾ അഭൂത പൂർവ്വമായ വിധം കഷ്ടപ്പെട്ടു വരുമ്പോൾ പ്രകൃതികോപത്താൽ വയ്പുകകളും വിളവുകളും നശിക്കുകകൂടി ചെയ്യാലത്തെ ഫലം വിശേഷിച്ചു പറയേണ്ടതില്ലല്ലോ. ഇന്നാട്ടിലെ ജനങ്ങൾ വിശേഷിച്ചു കൃഷിക്കാർ കഷ്ടകാലങ്ങളിലേക്കൊ നഷ്ട കാലങ്ങളിലേക്കൊ സംഭരിച്ചു വെക്കുന്ന സ്വഭാവമില്ലാത്തവരും പ്രായേണ അതിനു കെല്പില്ലാത്തവരുമാകുന്നു. സ്വാഭാവിക ശക്തിയോ സംഘടനയോ അവർക്ക് വളരെ

അപൂർവ്വമാത്രം. അതിനാൽ ഏതൊരു സാക്ഷ്യത്തിൽ  
 ഗവണ്മെന്റ് മാത്രമാണ് അവർ ഏകാധിപത്യമായി  
 അവർ ഗണിക്കുന്നതെന്ന് മുൻ കാല സാക്ഷ്യങ്ങൾ ധാരാ  
 ളം ഉദ്ദേശിക്കുന്നതാകുന്നു.

2. Translate any two of the following passages into Malayalam :—

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(a) At the root of much of the poverty of the people of India and of the risks to which they are exposed in seasons of scarcity lies the unfortunate circumstance that agriculture forms almost the sole occupation of the mass of the population, and that no remedy for present evils can be complete which does not include the introduction of a diversity of occupations, through which the surplus population may be drawn from agricultural pursuits and led to find the means of subsistence in manufactures. There is no fear that industrial development will cause an undesirable diversion of labour and capital from agriculture.

(b) It has been suggested to us that the co-ordination of banks under some practical scheme would largely help to bring about a healthy development of the existing institutions. This is undoubtedly true, because the several joint-stock banks are now working without any mutual understanding whatever and are doing business, each for itself, with the result that the public are not properly served. It should be possible to make them more useful if a Central Bank is established. The Central Bank should function mainly as a bankers' bank. It should be able to assist the member banks in times of stress and sympathetically supervise their policy.

(c) This brings us to the question how far the Government is justified in resorting to loans for meeting its expenditure. There are a few well-established rules in this regard, namely, first, that all recurring expenditure should be met out of revenue; second, that expenditure on remunerative public works may be met out of borrowed funds; and third, that extraordinary non-recurring expenditure, consequent on a war or any other sudden calamity, may be financed, in part at least, by means of loans. In regard to the third proposition, a difference of opinion exists among modern economists.

3. Write an essay in Malayalam on one of the following topics :—

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- (a) The proper functions of customs tariffs.
- (b) The employment of women in industry.
- (c) The economic advantages and disadvantages of the caste system.

## BENGALI COMPOSITION

*Paper-Setter*—MR. SYAMAPRASAD MOOKERJEE, M.A., B.L.,  
 BARRISTER-AT-LAW.

*Examiner*—DR. TAMONAS CHANDRA DASGUPTA, M.A., PH.D.

*The figures in the margin indicate full marks*

1. Translate into Bengali any two of the following :—

- (a) The object of money is to provide a medium of exchange. Money by itself is of no particular use to us. For example, we cannot eat it, we

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cannot wear it, it will not house us or keep us warm. Its sole use to us is that we can exchange it for the things we need. Even gold by itself is of no use to us. The settler on a desert island who has discovered a sackful of sovereigns will cheerfully part with the lot for a drink of water. We want money and try to get as much as we can because we know that we can exchange it when we like for the things we really need.

(b) What are our wants? First, I should say—land, air, and water. 20  
We must have land to stand on, air to breathe, and water to drink and wash in. Next, I should add food, which must be adequate and wholesome. Then comes clothing. Next comes a roof over our heads to protect us from the sun, wind, and rain, and, finally, a fire to keep us warm and to cook our food. These are the bare, absolute necessities of life. If any one thinks that by themselves they are insufficient, then, if he served in the war, let him recall the day when he was glad if he could get all of them as he needed them.

(c) The people of the far, far north are called Eskimos. They have 20  
no houses such as we have to live in. All the winter they live in huts made of snow. These huts are very clean and white when they are new; but they soon turn dirty and when the summer comes they begin to melt. Sometimes they find logs of wood on the shore which have been drifted by the waves from some other country. These they gather and build their huts with them. When they cannot get wood, they use the pure white snow. It is frozen so hard that it keeps firm all through the winter.

2. Give Bengali equivalents for the following: (a) Gold standard, 10  
(b), National Debt, (c) Exchange Banks, (d) Bill of Exchange, (e) Money market.

3. Write an essay in Bengali on one of the following subjects:— 30

(a) Labour unrest in India; (b) The effects of the jute slump in Bengal; (c) The revival of Indian cottage industries; (d) The economic, social, and political effects of the Permanent Settlement in Bengal.

4. Translate the following into English:— 20

দুঃখীর প্রতি রাজা রামমোহনের ষষ্ঠে সহানুভূতি ছিল। দুঃখীর  
দুঃখে তাঁহার হৃদয় গলিয়া যাইত। তাহাদের উপর কেহ অত্যাচার করিলে,  
তিনি তাহা সহ করিতে পারিতেন না। নিজ গ্রামে তাঁহার একটি বাজার  
ছিল। সেই বাজারে সমাগত বিক্রেতাদিগের নিকট তাঁহার জ্যেষ্ঠপুত্র  
তোলা গ্রহণ করিতে আরম্ভ করেন। তিনি তাহা অবগত হইয়া বড়ই  
দুঃখিত হইয়াছিলেন। পুত্রকে তৎক্ষণাৎ ডাকিয়া তোলা গ্রহণ করিতে  
নিষেধ করিয়া দিলেন।

## GENERAL ECONOMICS

Paper-Setter and Examiner—SIR J. C. COYAJI, KT., B.A., LL.B.

*The questions are of equal value*

*Answer ANY SIX questions*

1. What is the exact economic meaning of the term 'productive'? Indicate the main conditions and tests of productivity.

2. On what lines would you define Capital?

'Capital is a class of goods, not a fund of value.' Explain.



3. Indicate and compare the principles which determine exchange value under (a) competition, and (b) monopoly.
4. 'The law of diminishing returns is only one phase of the universal law of variable proportions.' Elucidate fully.
5. Indicate the important economic functions performed by the mercantile class.
6. 'Rent does not enter into cost of production.' Explain this proposition with reference both to the rent of agricultural land and to other forms of economic rent.
7. What are the economic services of advertising?
8. Under what circumstances may a protective tariff be the means of increasing the total product of the industry of a country?
9. Indicate the various ways in which credit (a) saves money, (b) assists industry.
10. Examine the benefits which a country receives from the introduction of a banking system.

## INDIAN ECONOMICS

*Paper-Setter*—MR. SATISH CHANDRA RAY, M.A.

*Examiner*—MR. NRIPENDRANATH DATTA, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*All questions are of equal value*

*Attempt only six questions*

1. Give the habitat of the principal mineral and commercial agricultural products of India. What countries consume the bulk of these products, and to what extent and in what manner is India benefited by their export?
2. Write short explanatory notes on :—
  - (a) Famine Insurance Grant.
  - (b) Countervailing duties on Cotton Goods.
  - (c) Home charges.
  - (d) Ryotwari Settlement.
  - (e) Occupancy ryot.
  - (f) Cadastral survey.
3. On what general principles should the State assist or encourage industries? How far can these principles be applied in encouraging the Handloom Industry? Briefly indicate the scope for the expansion of small-scale industries.
4. Discuss critically the advantages and disadvantages of stabilising the Exchange value of the Rupee (1) at 1s. 6d., (2) at 1s. 4d.
5. Under what circumstances did the Government of India repeal the provisions of the law for the sale of gold in India? What have been the reactions of this measure on Indian trade?
6. Discuss the *pros* and *cons* of the proposition that for the purpose of assuring the food supply of the country, it is advantageous to levy a heavy export duty on food-grains.

7. Indicate the causes of the recent contraction of currency in India. What bearing has it upon the prevailing economic depression?

8. Explain the difficulties of Indian Industrialists in financing their enterprises. Do you advocate the establishment of Industrial Banks? Are any safeguards necessary for their management?

9. Indicate the causes which are responsible for the present unsatisfactory condition of the Co-operative Societies in Bengal. What remedies do you suggest?

## ECONOMIC GEOGRAPHY

*Paper-Setter*—MR. MOHITKUMAR GHOSH, M.A., B.COM.

*Examiner*—DR. NALINIMOHAN PAL, M.A., PH.D.

*The questions are of equal value*

*Answer ANY SIX of the following questions*

1. Give an account of the mineral resources of India and of the extent of their commercial exploitation.
2. 'The gold-mines are the back-bone of South Africa.' Discuss this statement.
3. Discuss, how far the question of transport controls the commercial organisation of Canada.
4. Estimate, and locate, the mineral wealth of Japan.
5. Discuss, with a sketch-map, the distribution of various types of irrigation works in India.
6. Consider the position of India with regard to her supplies of (a) fuel and (b) water-power.
7. Estimate the importance of textile industries in the commercial economy of Great Britain.
8. Examine the position of Egypt in relation to world trade routes.
9. What special advantages have enabled Germany to become a great manufacturing country in the world?

## BUSINESS ORGANIZATION

*Paper-Setter*—MR. PRAPHULLACHANDRA NANDI, B.Sc.

*Examiner*—MR. MOHITKUMAR GHOSH, M. A. (CAL.), B.COM.

(LOND.).

*The questions are of equal value*

*Answer ANY SIX of the following questions*

1. What is a holding company, and how does it exert its influence over its subsidiaries? What advantage is derived from such an organization?
2. How would you differentiate and allocate 'indirect wages' to the different processes of a manufacturing business?

3. Describe a multiple shop by a suitable example.
  4. Compare the function of a Bank with that of an Insurance Company in the financing of trade and industry.
  5. The rate of interest for the first half of the calendar year is different from that during the second on current accounts in some banks in Calcutta. Give your views as to the probable reasons for same.
  6. What is the necessity of a 'quinquennial valuation' in a life insurance office? What do you understand by 'a bonus of 25 per thousand has been declared on endowment policies'?
  7. Describe any suitable method of indexing letters in the office of a share-broker.
  8. As manager, what are the different departments you would expect to find in a newspaper printing and publishing company, and how would you control them?
  9. Write a letter to your consignee regarding the superior quality of goods supplied—the low turn over—and hence requesting a higher commission rate on future consignments.
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## INLAND AND FOREIGN TRADE

*Paper-Setter and Examiner—DR. J. C. SINGHA, M.A., PH.D.*

*The questions are of equal value*

*Answer ANY SIX questions*

1. Explain the theory of comparative cost, and show how the policy of free trade is supported by this theory.
2. What is meant by the statement that the exports and imports of a country must be equal? How would you, in the light of this statement, account for the fact that the visible exports from India normally exceed her visible imports?
3. Give a short account of British methods of financing foreign shipments. In what respects do these methods differ from those adopted by Germany?
4. Examine the part played by auction sales in the wholesale markets for imported produce. In particular, estimate the importance of London in this respect.
5. (a) What are the chief causes of fluctuations in foreign exchange?  
(b) How can traders safeguard themselves against the risk due to such fluctuations?
6. Describe the present commercial organisation for the distribution of imported goods from Calcutta to the mofussil centres in Bengal. Do you think that the credit facilities at present used in this trade are quite satisfactory?
7. What do you know of the chief measures taken by the Government of India in recent years for promoting the foreign trade of this country?
8. Give a short account of India's foreign trade in cotton manufactures during the last decade. Do you agree with the view that Japan has now become a more formidable competitor to the Indian cotton mills than England?
9. Describe the present position of the U.S.A. in India's foreign trade, mentioning the chief items of imports from and exports to that country.

10. Write notes on any four of the following :—

- (a) Mate's Receipt.
  - (b) Trust Receipt.
  - (c) Charter Party.
  - (d) Certificate of Origin.
  - (e) Indent.
  - (f) Council Bills.
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## ACCOUNTANCY

*Paper-Setter*—MR. S. N. MUKHERJEE, M.A.

*Examiner*—MR. NARENDRANATH SARKAR, M.A.

*The questions are of equal value*

*Answer ANY SIX questions*

1. C. Churchill & Co., Ltd., of London, purchased from G. Gorion, of Paris, 100 dozens of French wine at 60 francs per dozen, and a bill at 60 days was drawn upon the company for the amount, and accepted. The entries of the transaction were made by C. Churchill & Co., Ltd., through their Journal, in sterling, at the rate of exchange of 150 francs per £. The Bill was subsequently paid by the company's bankers, the rate of exchange at which the company was charged being 135<sup>25</sup> francs per £.

Journalise the above transactions, and show the account with G. Gorion in the Ledger of Churchill & Co., Ltd.

2. Friends' Union, Ltd., was incorporated on the 30th April, 1931, to take over a business, as a going concern, as from that date. The total sale for the year ended 31st December, 1931, was Rs. 2,00,000, made up of Rs. 60,000 for the period 1st January to 30th April and Rs. 1,40,000 for the remaining portion of the year.

The Gross profit, shown by the accounts for whole year, was Rs. 50,120, and the expenses for the year were Rs. 29,964 which included Rs. 1,500 for Directors' Fees.

You are required to apportion the year's profit on the basis of total sale, showing the amount which should be treated as profit made prior to incorporation and that portion made subsequently.

3. X, Y, and Z were in partnership, their respective capitals at 31st December, 1930, being Rs. 15,000, Rs. 10,000, and Rs. 5,000. It was agreed that as at that date X should retire and that P should be admitted as a partner. X's capital remained in the business as a loan at 10 per cent, and nothing was paid to X in respect of Goodwill. P paid a premium of Rs. 3,000 to Y and Z to be divided between them in proportion to their holdings of capital, such premium being left in the business as additional working capital. P also brought in a further Rs. 2,000 on Capital A/c. The new firm of Y, Z, and P agreed to share profits in the same proportions as their new capital. Prepare the necessary accounts showing the change of partnership holdings, and state division of profits at the end of 1931, assuming the total profits to be Rs. 8,000 before charging interest on X's loan.

4. Uncertain Thing, Ltd., agreed to purchase the business of Sure, as on 1st January, 1932. His Balance Sheet on that date was as follows :—

<i>Liabilities</i>		<i>Assets</i>	
	Rs.		Rs.
Capital	3,250	Land and Buildings (subject ... to mortgage)	3,000
Loan on Mortgage of Land and Buildings ...	1,000	Plant and Machinery ...	1,000
Sundry Creditors ...	250	Loose Plant and Tools ...	300
Bills Payable ...	600	Sundry Debtors ...	1,050
Bank Overdraft ...	1,500	Stock in Trade ...	1,200
		Cash in hand ...	50
	<u>6 600</u>		<u>6,600</u>

The purchase price was fixed at Rs. 5,500, and in addition, the company took over the Mortgage, and agreed to discharge the liabilities to sundry Creditors and upon Bills Payable. The purchase price was to be discharged by the payment of Rs. 2,000 in cash, the allotment of Rs. 2,000 Ordinary Shares, fully paid and Rs. 1,500 5% Cumulative Preference Shares, fully paid.

The purchase was completed by the payment of the cash and the allotment of the shares on the 2nd February, 1932.

Make the necessary journal entries in the books of the company for recording the above transactions

5. (a) C, D, and E dissolve partnership. They shared profits as 3 : 1 : 2 : The assets are realised PIECEMEAL as under—

Asset	In books at Rs.	Sold for Rs.
Stock-in-trade ...	130	160
Debtors ...	140	110
Furniture ...	101	80

The creditors accept 90% of their claims, being paid Rs. 297. Shew the Realisation A/c.

(b) Distinguish between Shares and 'Bonds'.

6. (a) You are requested by a large Retail Trader to prepare a Profit and Loss Account for the year and Balance Sheet at 31st December, 1931. Upon inspecting the books, you find that there are no records of impersonal transactions in any ledger, but that a Cash Book and Personal Ledgers only are available.

Describe what course you would adopt to compile the requisite accounts, short of completing the double entry in detail.

(b) Write short notes on :—

(1) Account current, (2) B/L, (3) Collateral security, (4) Del credere commission, (5) I.O.U., (6) Lessor and Lessee.

7. In preparing the accounts of a business, a difference occurs of Rs. 100. This difference is carried to a Suspense A/c and the Balance Sheet drawn up shewing the item on the debit side.

The following errors are discovered, and you are required to make the necessary adjustments by Journal entries, and to state the effect of each item on the accounts :—

- (1) Sale Rs. 100 to J. Jadu posted to the credit of his a/c.
- (2) Purchase Rs. 15 from D. Dutt posted to the credit of A. Dutt.
- (3) Sales Returns Book overcast Rs. 10.
- (4) Purchase Day Book overcast Rs. 100.
- (5) Repairs to Plant, Rs. 40 posted to debit of Plant A/c.
- (6) Bill payable for Rs. 50 to K. Kumer in settlement of this sum entered in Bills Receivable Book and posted as Bill Receivable.
- (7) Purchase from Laidlaw, Rs. 180, not posted from Day Book.

## ELEMENTARY COMMERCIAL LAW

*Paper-Setter*—MR. N. C. CHATTERJEE, M.A.,  
BARRISTER-AT-LAW.

*Examiner*—MR. SATYENDRANATH CHATTERJEE, B.Sc.,  
BARRISTER-AT-LAW.

*The questions are of equal value*

*Answer FOUR questions from EACH half*

## FIRST HALF

1. 'A mere mental acceptance not evidenced by words or conduct is in the eye of the law no acceptance.' Comment.
2. Write notes on *quantum meruit*, *novation*, and *liquidated damages*.
3. How far are the liabilities of the parties to a contract affected by supervening impossibility?
4. What is a bailment? When is a Railway Company liable to a passenger for the loss of his luggage?
5. When and how does property pass in a contract for the sale of unascertained goods?
6. Distinguish between *Vendor's Lien* and *Stoppage in Transitu*.
7. Distinguish between Pledge, Mortgage, and Lien.

## SECOND HALF

8. What is the position of an undisclosed principal? When is an agent personally liable?
9. What are the rights and obligations of a partner after dissolution of a partnership?
10. When, how, and to whom should notice of dishonour of a Bill of Exchange be given?
11. Distinguish between shares, debentures, and debenture stock.
12. When and how can you apply for the compulsory winding up of a company?
13. What is a fraudulent preference? What is its effect on insolvency?
14. What is the effect of a submission to arbitration on an action?

## ADVANCED ACCOUNTANCY AND AUDITING

*Paper-Setters*— { MR. RANJIT RAY, M.A.  
                              ,, NARENDRA K. MAJUMDAR, M.A.

## FIRST PAPER

*Examiner*—MR. G. BASU, M.A.

*FIVE questions carry full marks*

*The questions are of equal value*

1. *Either,*

Mr. Dutt and Mr. Das join in partnership on the 1st of Jan., 1931, without any formal deed between them. The capital paid in by each of

them is : Mr. Dutt, Rs. 60,000 and Mr. Das Rs. 40,000. On the first of April, Mr. Das advanced a sum of Rs. 10,000 to the firm as loan. but without any agreement as to interest. For the half year ended 30th June, 1931, the firm makes a profit of Rs. 50,000. The partners cannot agree on the following points : (a) Interest on capital, (b) Interest on loan, (c) Division of profit. You are required to prepare accounts on the lines you would adopt, giving reasons for your actions.

Or,

(a) Black & Co., in England, who have to remit Rs. 25,000 to Calcutta, ascertain that the Chartered Bank of India will sell bills @ 1s. 5½d. and the Mercantile Bank of India @ 1s. 5¼d. Show the sterling cost of sending the money through the cheaper bank, and how much extra has to be paid if sent through the other bank.

(b) The Calcutta Trading Co., Ltd., agreed to purchase from Mr. Sarkar the assets and goodwill of his business which were as follows : Landed Property, Rs. 60,000; Plant, Rs. 1,60,000; Goodwill, Rs. 1,40,000; Stock, Rs. 40,000. Payment was made on the 1st November, 1931, as to Rs. 3,00,000 in 6% Debentures, and the balance in Ordinary shares of Rs. 20 each, valued at a premium of Rs. 5 each. Show the necessary entries in the Books of the company to record the transactions.

2.

Either,

The Alpha Manufacturing Co., Ltd., have a nominal Capital of Rs. 2,00,000, divided into 12,000 'A' shares and 8,000 'B' shares of Rs. 10 each, of which, 10,000 'A' shares and 5,000 'B' shares were issued and fully paid up. The company's articles provide that the profits should be divided as follows, so far as the general meeting may decide :—

- (a) In payment of a cumulative dividend of 10% on the 'A' and 20% on the 'B' shares.
- (b) In payment of a non-cumulative dividend of 7½% on the 'A' shares.
- (c) In payment of a non-cumulative dividend of 15% on the 'B' shares.
- (d) In payment of a further dividend *pro rata* but so that the dividend on each 'B' share should be twice that on each 'A' share.

The General Manager was entitled to a bonus of Rs. 100 for each 1% dividend paid on the 'A' shares above 10%. The profits for the year 1931 amounted to Rs. 90,000 and there was an undistributed balance from 1930 of Rs. 35,000. The General Meeting decided to pay the dividends under (a), (b), and (c), above, and a further dividend under (d) of 7½% on the 'A' and 15% on the 'B' shares, and, after providing for the General Manager's bonus, to place one half of the balance to Reserve Fund and carry the other half forward to the next year. Make out an Appropriation Account.

Or,

From the following particulars make out the Profit and Loss Account of the Southern India Bank, Ltd., for the year ended 31st Dec., 1931 :—

		Rs.
Interest Received	...	3,00,000
Rebate on Bills not discounted brought forward from last year	...	10,000
Interest paid	...	1,00,000
Discount on bills discounted	...	1,00,000
Commissions received	...	20,000
Salaries	...	1,40,000
Printing and Stationery	...	10,000
Directors' and Auditors' fees	...	70,000
Rebate on bills discounted to be carried forward to next year	...	15,000
Profits on investments sold	...	5,000
Depreciation written off Investments	...	25,000
Bad debts written off	...	15,000
Further amount set aside to provide for doubtful debts	...	10,000

3.

*Either,*

A and B are equal partners, and they agree to take C into partnership on the introduction of Rs. 30,000 as capital. The Balance Sheet of the old firm was as follows :—

	Rs.		Rs.
Creditors	... 30,000	Debtors	... 50,000
Capital—		Fixtures and Fittings	... 5,000
A	... 37,500	Cash at Bank	... 5,000
B	... 37,500	Stock	... 45,000
	1,05,000		1,05,000

It is agreed to amend the above balance sheet by making a reserve of Rs. 5,000 for bad debts, to depreciate fixtures by Rs. 1,000, and to write 10% off stock. It is also agreed to create a goodwill of Rs. 15,000 which is to be so apportioned as to show all the three partners with equal capital. Prepare an amended balance sheet embodying the above proposals.

*Or,*

A, B, and C were partners. Their partnership deed provided that they were to share profits thus : A 26%, B 34%, and C 40%, and that if a partner died his capital should remain in the business, for a stated period, at a fixed rate of interest, but that the deceased partner's share should be credited with an amount for goodwill based upon one and a half years average profit for the five years prior to his death, but be subject to a deduction of 5% from the book debts. C died and the profits of the firm for the five years were agreed at Rs. 16,000, 28,000, 24,000, 36,000, and 20,000 respectively, and the book debts at Rs. 1,20,000. Prepare a statement showing the amount of goodwill to be credited to C's account, and give the journal entries in the firm's books necessary to carry out the transaction.

4. Brassware, Ltd., was registered with a nominal capital of 1,00,000 shares of Rs.10 each. Of this capital, 50,000 shares were issued and fully paid up. The following Trial Balance was extracted from the books of the company as on the 31st Dec., 1931 :—

	Rs.	Rs.
Goodwill	... 1,50,000	
Share Capital	... ..	5,00,000
Calls in arrear	... 1,000	
Land and Buildings	... 2,70,000	
Plant and Machinery	... 64,000	
Interim dividend paid Aug., 1931	... 12,500	
Sales	... ..	6,38,120
Sales return	... 11,840	
Purchases	... 2,89,720	
5% Debentures	... ..	1,50,000
Stock 1st Jan., 1931	... 1,48,640	
Office furniture	... 3,200	
Manufacturing Wages	... 1,99,640	
Factory Power	... 32,410	
Patents Account	... 20,000	
Sundry Debtors	... 48,380	
Sundry Creditors	... ..	23,340
Cash in Hand	... 560	
Cash at Bank	... 31,400	
Profit and Loss A/c	... ..	28,960
Preliminary Expenses	... 6,200	
Discount Account	... 940	
Carriage Inwards	... 9,780	



	Rs.	Rs.
Carriage Outwards ...	12,710	
Rates, Taxes, and Insurance	1,420	
Salaries ...	8,210	
Directors' fees ...	1,090	
Bad debts reserve ...	...	5,000
Transfer fees ...	...	50
Purchase Returns ...	...	11,410
Machinery Repairs ...	3,740	
Cost of patterns ...	22,000	
Debenture Interest ...	7,500	
	<u>13,56,880</u>	<u>13,56,880</u>

You are required to prepare Manufacturing and Profit and Loss accounts for the year ended 31st Dec., 1931, and a balance sheet as on that date. Before preparing these accounts the following adjustments are necessary: (1) 50% of the patterns account is to be charged against cost of manufacture; (2) the stock on the 31st Dec., 1931, was valued at Rs. 1,56,640; (3) 50% of Preliminary Expenses is to be written off; (4) unexpired insurances amounted to Rs. 390; (5) 10% depreciation is to be written off the Machinery and Plant, 15% off Patents, and 10% off the Office Furniture; (6) the bad debts reserve is to be increased to Rs. 10,000.

5. The following is the Balance Sheet and Profit and Loss account of the Ramshackle Motor Car Co., Ltd. You are required to point out errors either of principle or practice, giving your reasons for the same:—

*Balance Sheet*

	Rs.		Rs.
To Capital ...	2,50,000	By Land and Buildings ...	87,650
„ Rs. 30,000 Mortgage debentures issued at 10% discount ...	27,000	„ Goodwill, Patents, Patents, Plant, and Work in Progress ...	74,342
„ Creditors—		„ Fixtures and Fittings (Office) ...	232
On open A/c ...	16,441	„ Investments ...	4,732
Debenture Interest ...	1,500	„ Cash at Bank and in hand ...	12,411
— — — — —	17,944	„ Capital Unissued ...	25,770
„ Reserve for Bad Debts ...	279	„ Debtors ...	2,075
		„ Stock ...	84,784
		„ Suspense Account ...	3,227
	<u>2,95,223</u>		<u>2,95,223</u>

*Trading and Profit and Loss Account*

	Rs.		Rs.
To Stock ...	21,441	By Sales ...	10,418
„ Purchases ...	58,937	„ Amounts paid on forfeited Shares ...	395
„ Wages ...	4,392	„ Appreciation in value of Securities ...	219
„ Rates and Taxes ...	1,174	„ Stock ...	84,784
„ Debentures Interest ...	1,600	„ Balance carried to suspense Account ...	392
„ Fuel and Lighting ...	1,062		
„ Cartage ...	589		
„ Office Expenses... ..	3,441		
„ Bad and Doubtful Debts... ..	279		
„ Preliminary Expenses ...	2,143		
„ Directors' fees ...	1,250		
	<u>96,196</u>		<u>96,196</u>

## SECOND PAPER

*Examiner—MR. S. R. BATLIBOI**(Auditing)**The questions are of equal value**Answer ANY SIX questions*

1. What is an Audit? Indicate briefly the objects and advantages of an annual audit from the view-point of a business man.

2. You are advised that the Cashier of a Company has just been suspended, as a result of a discovery that moneys received by him from customers have not been passed through the books. What steps would you take to ascertain the extent of any defalcations? Give instances of fraud which would, for the time being, make it difficult to detect a shortage of cash.

3. The Accounts of a Company, of which you are auditor, show a fall of 17% in gross profits during 1931. Suggest three possible reasons for the decrease, and state what steps you would take to ascertain the cause in a particular case.

4. A manufacturer has suffered considerable losses from the inclusion of 'dummy' workmen in Wages Sheets. How may such entries be avoided or detected?

5. In what circumstances would you refuse to accept vouchers in the audit of accounts?

Give two examples and explanations.

6. A client of yours, who possesses very little knowledge of book-keeping, keeps his books by single entry methods. He is desirous of adopting a proper double entry system and seeks your advice.

The major portion of his business consists of cash sales, but some credit sales are also effected.

Assume your own details as to the books your client already keeps, and submit a report, with instructions, as to their conversion to double entry methods together with descriptions of any further books you consider necessary.

7. You are auditing the accounts of an Insurance Company, and the following Assets appear in the Balance Sheet. How would you verify the correctness of them?—

- (1) Loans on Company's Policies within their Surrender Values.
- (2) Investments in Reversions.
- (3) Agents' Balances.
- (4) Outstanding Premiums
- (5) Interest Outstanding and Interest Accrued.

8. What steps would you, as Auditor, take to satisfy yourself that all the liabilities (other than contingent liabilities) of a small firm of merchants were included in the Balance Sheet?

9. Is a company bound to replace lost capital out of revenue before it can declare dividends? State fully the reason for your answer.

Are capital profits available for distribution as dividend? If so, in what circumstances?

If there are not sufficient profits to pay the dividends on preference shares, how should the arrears be dealt with in the accounts of a company?

10. In the course of an audit of Elastic, Ltd., you discover that :—

- (a) Freehold Premises are mortgaged to the Bank, the liability being included under Sundry Creditors;

- (b) Investments of the market value of Rs. 40,000 are included in the books at a cost of Rs. 25,000;
- (c) The Directors have appropriated to General Reserve a sum of Rs. 20,000 which will not leave a sufficient balance to credit of Profit and Loss Account to enable the usual dividend on the Ordinary Shares to be paid.

State concisely how these matters should be stated, if at all, in the Company's published Balance Sheet.

## BANKING AND CURRENCY

*Paper-Setters*—{ MR. A. C. SENGUPTA, M.A.  
DR. HARISCHANDRA SINHA, M.Sc., PH.D.

### FIRST PAPER

*Examiner*—DR. HARISCHANDRA SINHA, M.Sc., PH.D.

*The questions are of equal value*

*Answer ANY SIX questions*

1. 'The banker who fails to distinguish between credit and investment fails in his first duty.' Consider this statement.
2. Mention the chief services of exchange banks in promoting the foreign trade of India.
3. Explain the meaning of *any five* of the following terms :—
  - (a) referee in case of need ;
  - (b) joint and several promissory note ;
  - (c) holder in due course ;
  - (d) blank transfer deed ;
  - (e) not negotiable crossing ;
  - (f) restrictive indorsement ;
  - (g) travellers' cheque.
4. Give correct forms for indorsement of cheques made payable to *any five* of the following payees :—
  - (a) Mrs. Susila Bala Basu ;
  - (b) Sir M. M. Fakhruddin ;
  - (c) Bengal Telephone Corporation, Ltd. ;
  - (d) Calcutta University Athletic Club ;
  - (e) Messrs. Basu & Co. ;
  - (f) Miss Doroty (name mis-spelt) Smith.
5. A crossed cheque which has been stolen is paid in good faith and without negligence by the bank on which it is drawn to the banker whose crossing stamp it bears. On whom will the loss fall, and why ?
6. Discuss fully *any two* of the following :—
  - (a) a banker's duty to preserve secrecy as regards his customer's affairs ;
  - (b) the liability, if any, incurred by a banker when advising a customer as to certain investments which the latter proposes to make ;
  - (c) incorrect entries in a pass book as affecting the banker as well as the customer.

7. What are the defects of *any three* of the following as security?—

- (a) a hessian delivery order;
- (b) a floating charge;
- (c) a second mortgage;
- (d) a guarantee;
- (e) shares in a limited company.

8. What do you understand by the bank rate and the market rate of discount of the London Money Market? State the conditions which determine each, and the relations which exist between them.

9. Define the following terms :—

- (a) bull; (b) bear; (c) contango; and (d) backwardation.

Explain clearly the method of carrying over stock.

## SECOND PAPER

*Examiner*—DR. B. RAMCHANDRA RAU, M.A., PH.D.

*The questions are of equal value*

*Answer ANY SIX questions*

1. What do you understand by barter? Why has barter been almost universally displaced by exchange through gold and silver?

To what extent do gold and silver satisfy the requirements of a good standard?

2. What do you understand by bimetallism? Under what conditions do you think this may be maintained? Give your reasons.

What is the difference between bimetallism and limping standard?

3. Explain what you understand by Gresham's law? In view of this law how do you account for the currency of standard money, token money, and paper money side by side?

4. If there is an appreciable change in the general level of prices in this country, in what direction will you look to find causes of this phenomenon? Give your reasons fully.

5. The rupee has been described as a note printed on silver. How far do you agree with this view? Accepting this view as correct, examine to what extent our note circulation (metallic and paper) has been convertible since the beginning of the present century.

6. Why do the Hilton Young Commission recommend that the power of note issue in India should be handed over to a Central Bank?

What possible disadvantage can there be in such a transfer, and how do the Commission recommend it should be met?

7. What led to the closure of mints in India in 1893? Explain how the closure of the mints was expected to solve the difficulty.

8. Fully explain the relative merits and demerits of a sixteen-pence and an eighteen-pence rupee from the points of view of all the economic classes in the country.

9. Write short notes on :—

- (a) Gold exchange standard, (b) Gold bullion standard, (c) Symmetallism, (d) Federal reserved system, (e) the Indian paper currency system.

## PUBLIC ADMINISTRATION

*Paper-Setters*—{ MR. PRAMATHAANATH BANERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.  
,, W. C. WORDSWORTH, M.A.

*Examiner*—SATISCHANDRA SEN, M.A.

## FIRST PAPER

*Answer ANY SIX questions*

*Candidates are required to give their answers in their own words  
as far as practicable*

*All questions are of equal value*

1. What are the powers given to Provinces under the Government of India Act regarding (i) provincial borrowing, (ii) provincial taxation?
2. Do officials in India enjoy any immunity from the jurisdiction of the High Courts?
3. How does the Ministry in England control the House of Commons?
4. What are the provisions of the Parliament Act, 1911?
5. How does the House of Commons control expenditure in England? How far is its control effective?
6. What are the functions of the Council of the Secretary of State for India? What are the qualifications for membership of it?
7. What are the functions of either the Lord Chancellor or the Home Secretary?
8. In a federal constitution for India how would you solve the problem of the States?
9. What powers can the Government of Bengal exercise with regard to (a) the Corporation of Calcutta, (b) the District Boards of Bengal? What do you consider the chief weaknesses of local self-government in India?
10. Indicate briefly the chief recommendations of any one of the following : (a) the Lee Commission Report, (b) the Donoughmore Commission (for Ceylon) Report, (c) the Simon Commission Report, (d) the Whitley Commission Report.

## SECOND PAPER

*Examiner*—MR. HARISCHANDRA SARKAR, M.A.

*Candidates are required to give their answers in their own words  
as far as practicable*

*All questions are of equal value*

*Answer ANY SIX questions*

1. 'The Courts in India treat Acts passed by the legislatures in India precisely in the same way in which the King's Bench Division treats the byelaws of a Railway Company.' (*Dicey*.) Do you agree?
2. 'A great step towards Provincial independence has been taken under the Montagu-Chelmsford Reforms.' Explain.

3. How far does the Council of State perform the functions of a Second Chamber?
4. Describe fully the extraordinary method of legislation in India under S. 87 B of the Government of India Act.
5. What limitations have been imposed upon the financial powers of the Indian Legislature by the Government of India Act?
6. Wherein does the position of a Governor of a Province in India differ from that of a constitutional Governor in a colony?
7. Write notes on : (a) Committee of Public Accounts, (b) adjournment for debate, (c) prorogation, (d) supplementary grants.
8. What are the powers and functions of the High Commissioner for India? What is his relation to the India Office?
9. What are the powers of the Secretary of State for India over transferred subjects?
10. What different kinds of work fall to the Indian Civil Service? Discuss briefly the organization of the Public Services in Bengal.

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## MODERN ECONOMIC HISTORY

*Paper-Setters*— { MR. BHUJANGABHUSHAN MUKHERJI, M.A.  
 ,, ROHINIMOHON CHAUDHURI, M.A.

### FIRST PAPER

*Examiner*—MR. J. KELLAS

*The questions are of equal value*

*Answer ANY SIX questions*

1. Give a critical estimate of the Physiocratic Theory of Distribution. How far, do you think, it has influenced the development of modern economic theory?
  2. Explain the principal features of Marxian Socialism, and analyse its influence on modern economic thought.
  3. 'Pauperism was the product of the Poor Law.' Explain.  
 Indicate, in this connection, the nature of the remedial measures that have been adopted to prevent abuses under the Poor Law.
  4. Give an account of the English Corn Laws, and discuss the main factors which led to their repeal.
  5. State the Malthusian doctrine of population, and indicate its practical limitations with special reference to India.
  6. Explain how far the rapid development of transport facilities helped an insular country like England to win her unique position in the industrial and commercial life of the world.
  7. Explain the social and economic effects of the Industrial Revolution in England.
  8. Explain how the Factory Acts in England represent an attempt at social justice. Give the main features of a modern factory legislation.
  9. What led to the appointment of the Bullion Committee in England? Give briefly the main findings of the Committee.
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## SECOND PAPER

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.*The questions are of equal value**Answer ANY SIX questions*

1. What are the causes of the decline of the handicrafts in India? Examine the effects of this decline upon the economy of village life.
2. What do you know of Ryotwari Settlements? On what principles is the assessment of land revenue under Ryotwari Settlements determined?
3. Trace briefly the rise and progress of the cotton mill industry in India. Can India be independent of foreign countries in respect of cotton goods?
4. What do you know of the problem of rural indebtedness in India? What steps have been taken by Government for its solution?
5. Indicate the steps that have been taken by Government to improve the conditions of employment of industrial labour in India. Do you advocate legislation for ensuring a minimum wage to the industrial workers of India?
6. Briefly examine the chief features of the Indian commercial policy during 1860—1900, and show its effects upon Indian industries.
7. Analyse briefly the nature of the India Public Debt. Is the entire debt legitimately chargeable to Indian revenues?
8. Describe the various steps through which financial decentralisation has taken place in India.
9. Trace the circumstances that led to the amalgamation of the three Presidency banks in India. What have been its effects upon the Indian money market?
10. What do you know of the Guarantee System? Why was it discarded in favour of State construction of railways?

## ECONOMICS OF TRANSPORT

*Paper-Setters*— $\left\{ \begin{array}{l} \text{MR. W. A. BURNS, M.A., BARRISTER-AT-LAW.} \\ \text{,, MOHITKUMAR GHOSH, M.A. (CAL.), B.COM.} \\ \text{(LOND.).} \end{array} \right.$

## FIRST PAPER

*Examiner*—DR. NALINAKSHA SANYAL, M.A., PH.D.*Answer ANY FIVE of the following questions**The questions are of equal value*

1. Discuss the various causes which lead to combinations among railway companies.
2. What considerations should, in your opinion, be taken into account before a new railway is constructed.
3. Explain clearly what relations now obtain between rail and road transport (a) in England, (b) in India.
4. Discuss the problem of gauge, with special reference to Indian Railways.
5. Discuss fully the effects on railway rates and fares of State ownership and State guarantees of interest.

6. Explain clearly the value of the inland waterways of Lower Bengal to the export trade of the province.
7. Describe the constitution and functions of the Indian Railway Conference Association.
8. Enumerate some of the benefits derived from the standardisation of rolling stock.

## SECOND PAPER

*Examiner*—MR. MOHITKUMAR GHOSH, M.A. (CAL.), B.COM. (LOND.).

*Answer ANY FIVE of the following questions*

*The questions are of equal value*

1. 'Monopoly and nationalisation are peculiarly suited to means of transport.'  
Critically examine this statement.
2. Compare the respective merits and demerits of Divisional and Departmental systems of railway organisation.
3. 'The railway rates should be based on the principle of value of service.'  
Examine the truth or otherwise of this statement.
4. Discuss the factors that influence 'Classification' in railway industry.
5. Discuss fully what part the railway industry in a country can play in affording protection to its industries.
6. Explain fully the meaning of the following :—  
 (a) Owner's risk rates.  
 (b) Exceptional rates.  
 (c) Pooling arrangements.
7. Discuss carefully the present organisation of the Railway Department of the Government of India, and show how far the Acworth Committee's recommendations in this respect have been adopted.
8. In what way does Road Transport compete with Railway Transport, and how far is such competition desirable?

## AGRICULTURAL ECONOMICS

*Paper-Setters*— { RAI BAHADUR BIJAYBIHARI MUKHERJI.  
                               { DR. N. N. GUPTA, PH.D.

### FIRST PAPER

*Examiner*—RAI BAHADUR BIJAYBIHARI MUKHERJI

*The questions are of equal value*

*Answer ANY FIVE of the following questions*

1. Discuss the essential principles of the Co-operative movement. State in what forms the movement has expressed itself in Bengal.



2. What are the functions of a central co-operative bank? What is its difference from a joint-stock money-lending concern?

3. What is Rural indebtedness? Discuss the effect of the co-operative movement on Agricultural indebtedness in Bengal. Is the relief up to the expectation? If not, why not?

4. Discuss the efficacy of the co-operative movement in a scheme of rural reconstruction in Bengal.

5. Discuss, in brief, the recommendations of the Indian Agricultural Commission regarding (a) Agricultural demonstration, and (b) Propaganda.

6. Discuss, in brief, any two of the recommendations of the Royal Commission on Indian Agriculture which appeals to you to be the most important, and give your reasons for agreeing or disagreeing with the views.

7. What, according to you, is the present economic position of an average Bengal cultivator? In what is his strength or weakness? What improvements can you suggest for his betterment?

8. What are the merits and demerits of Jute and Paddy cultivation in Bengal? Compare and contrast.

## SECOND PAPER

*Examiner*—DR. N. N. GUPTA, PH.D.

*The questions are of equal value*

*Answer ANY FIVE of the following questions*

1. What are the advantages and disadvantages of large scale farming as compared with the medium scale and small scale farming?

2. What are the chief requisites for economy of labour? How best can you economise land?

3. What is the law of diminishing return in agriculture? What do you understand by the margin of cultivation going up or going down?

4. Draw up a scheme of rural reconstruction for a village either in a wet district in East Bengal or a dry district in West Bengal.

5. Discuss the position of the cottage industries in the economic life of an ordinary village in Bengal. Choose any cottage industry which you wish to be introduced, and discuss its position.

6. What are the main causes of the fragmentation of holdings in Bengal?

7. (a) What are the first three important crops of Bengal?

(b) What percentage of land in the province yield (1) one crop, (2) two crops, and (3) more than two crops?

# L. T. Examination

1932

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## THEORY AND PRACTICE OF TEACHING IN RELATION TO MENTAL AND MORAL SCIENCE

FIRST PAPER

*Paper-Setter and Examiner—MR. S. P. BISWAS, M.A.*

*The questions are of equal value*

*Answer ANY FIVE of the following questions*

1. Point out clearly the bearing of Psychology on Education, and explain why and how a teacher should study Psychology.
  2. Give a rough sketch of the structure and function of the sensori-motor arcs. Why is a knowledge of the nervous system valuable to teachers?
  3. Education is for behaviour, and habits are the stuff of which behaviour consists. Discuss fully.
  4. Write notes on the following, laying special stress on their bearing on education:—
    - (a) Apperception.
    - (b) Eye-memory.
    - (c) Interest.
    - (d) Verbal Suggestion.
  5. 'To obey another will prepare a pupil to obey reason when the age of reason comes.' How far do you agree with this? Explain in this connection your conception of obedience. Is it necessary for the development of will and character?
  6. What are habitual associations? Show why a teacher should build up useful systems of association in the pupil's mind.
  7. Find out the place and importance of memory in education. Is a good memory identical with cramming? Show how memory can be trained.
  8. Do you find any difference between 'a child at play' and 'a kitten at play'? What are the different theories of play? Explain why you should have organised games as a part of school education.
  9. 'Remove Hope and Fear, and there is an End of all Discipline.' Bring out the full significance of it, and show how far you support punishment as a disciplinary or educative measure.
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## METHODS OF TEACHING SPECIFIC SUBJECTS AND SCHOOL MANAGEMENT

### SECOND PAPER

*Paper-Setter and Examiner—MR. BINOYBHUSHAN SARKAR,  
B.A., B.T.*

*The questions are of equal value*

\* *Answer TWO questions from Group A and THREE from Group B*

#### GROUP A

1. Mention the chief points for consideration under 'School Management.' Clearly set forth the value of school management for school teaching and school discipline.
2. Examine the statement: 'Barbarous discipline makes for barbarous character'. What is the true aim of discipline? Suggest some ways and means of improving discipline in the schools in the present circumstances of the country.
3. Illustrate by examples how the principles of 'Child-centricism' and 'Correlation' have affected the curriculum and the methods of instruction.
4. Show how—
  - (i) a wrong answer by a pupil is oftentimes the teacher's best ally;
  - (ii) a strange answer is not a stupid answer.

Mention the common mistakes a teacher commits in the treatment of of pupils' answers.

#### GROUP B

1. Write teaching notes on *any one* of the following (mentioning in each case the class for which the lesson is intended):—
  - (a) The invasion of India by-Alexander the Great.
  - (b) The importance of diet for health.
  - (c) The three angles of a triangle are together equal to two right angles.
  - (d) Any short English poem you remember.
2. Comment on the dictum: 'In teaching Geography we should begin from home and naturally pass on to the bigger world'. Prepare a scheme of six lessons in home geography for the beginners.
3. Is it correct to say—'The aim of a dictation lesson is not to test spelling, nor even to teach it'? Support your answer by arguments. What is its true aim, and how would you realise it?
4. Discuss some of the improved methods of teaching History. Name some apparatus and devices of teaching by which you can make it a really training subject for the higher forms.
5. 'The teaching of Arithmetic for the beginners should be concrete.' Give an example. Is concrete teaching the real teaching? If not, say why not; and also say why then such teaching is recommended.

## SELECTED EDUCATIONAL CLASSICS

## THIRD PAPER

*Paper-Setter and Examiner—MR. GANGACHARAN DASGUPTA, B.A.*

*The figures in the margin indicate full marks*

*Answer Question 9 and FOUR others*

1. What, according to Pestalozzi, are the main principles of Moral Education? Which of them can you apply with profit to the schools of Bengal? 15
  2. How, according to Pestalozzi, would you develop the practical capacity of children in their school life? Give your opinion on the soundness of his suggestions. 15
  3. Discuss Pestalozzi's ideas with regard to the teaching of language and grammar. 15
  4. What are the ways suggested by Pestalozzi by which the learning process of children is carried on? Do you fully agree with him? Give reasons. 15
  5. Discuss the place of Anschauung in the early education of the child. 15
  6. Through what phases, according to Pestalozzi, does the human mind pass from the early confused impressions of sense to definite ideas? 15
  7. Summarise the views of Pestalozzi with regard to the proper organization of the knowledge of children. Criticise them. 15
  8. Elaborate the ideas contained in *any three* of the following :— 15
    - (a) Every stage of development must be perfected before it can be utilized to a higher end.
    - (b) Man is not in the world for his own sake; it is only through perfecting his fellowmen that he himself becomes perfect.
    - (c) From the moment the mother takes the child on her knee she teaches him.
    - (d) Training in practical efficiency follows precisely the same course as that of the intellect.
    - (e) Learning to write seems to me a kind of learning to speak.
  9. Write an essay on *any one* of the following :— 40
    - (a) The best method of teaching English in Bengal schools.
    - (b) How would you develop right civic spirit in school children?
    - (c) The value to the community of a good system of Primary Education.
-

# SELECTED COURSE IN MODERN ENGLISH PROSE AND POETRY

## FOURTH PAPER

*Paper-Setter and Examiner*—REV. A. CAMERON, M.A., B.T.

*The figures in the margin indicate full marks*

### SECTION I

*Answer Question 1 and two others*

1. Explain, with reference to the context, *any four* of the following passages :— 20

- (a) Now, by two-headed Janus,  
Nature hath fram'd strange fellows in her time :  
Some that will evermore peep through their eyes  
And laugh like parrots at a bag-piper ;
- (b) The brain may devise laws for the blood, but a hot temper  
leaps o'er a cold decree : such a hare is madness the youth, to  
skip o'er the meshes of good counsel the cripple.
- (c) O, these deliberate fools ! when they do choose,  
They have the wisdom by their wit to lose.
- (d) I speak too long ; but 'tis to peise the time,  
To eke it and to draw it out in length,  
To stay you from election.
- (e) Thou almost mak'st me waver in my faith  
To hold opinion with Pythagoras,  
That souls of animals infuse themselves  
Into the trunks of men :
- (f) There's not the smallest orb which thou behold'st  
But in his motion like an angel sings,  
Still quiring to the young-eyed cherubins ;  
Such harmony is in immortal souls ;

2. 'The Merchant of Venice' has always been one of the most popular of Shakespeare's comedies. How do you account for this? 15

3. Discuss the statement that 'The Merchant of Venice' is a comedy of intrigue. 15

4. Show that there is a strong element of contrast among the characters in 'The Merchant of Venice.' 15

5. As an eye-witness of the Trial Scene, with a knowledge of all the relevant facts, describe your feelings. 15

### SECTION II

*Answer Question 6 and two others*

6. Estimate and illustrate from 'A Tale of Two Cities' the depictive genius of Dickens. 20

7. What do you think of Mr. Jarvis Lorry and the part he played in the lives of his friends? 15

8. Discuss the use of 'comic relief' in 'A Tale of Two Cities'. 15

9. Write down your own impressions of Sydney Carton. 15

10. Discuss the emotional appeal in 'A Tale of Two Cities'. 15

## B. T. Examination

1932

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### THEORY AND PRACTICE OF TEACHING IN RELATION TO MENTAL AND MORAL SCIENCE

#### FIRST PAPER

*Paper-Setter and Examiner* — DR. SATYANANDA RAY, M.A., B.D.,  
PH.D.

*Only FIVE questions to be attempted*

*All questions are of equal value*

1. Why are instincts of special importance to school teachers? Name some of the instinctive and emotional responses which may be modified or conditioned with a view to securing good results in school work.

Or,

Can fear be eliminated or modified in early life? What is the educational significance of the experiments in conditioned responses made by Pavlov and Krasnogorski in Russia, John B. Watson and Mary Cover Jones in America?

2. Define interest. Distinguish between native and acquired interest. In case a pupil is not interested in Arithmetic, what steps may the class teacher take to develop his interest in that subject? In this connection, discuss which precedes the other, interest or attention.

3. Distinguish between imagination and memory. State clearly the distinction between productive and re-productive imagination. In what respect does the imagination of the child differ from the imagination of an adult of twenty-five?

4. What is cramming? Would you justify this particular method of memorising? What laws of learning are violated by a student who uses the cramming method? Describe two classic experiments in memorising or learning process.

5. Distinguish between active and passive learning. How is learning influenced by (a) rewards and punishment; (b) the pupil's (i) 'will to learn', (ii) knowledge that he is making progress, (iii) interest?

6. What do intelligence tests and performance tests measure? Does an intelligence test measure personality, ambition, and one's ability to adapt himself to his environment? What are the specific contributions of Seguin, Binet, and Terman, to the intelligence testing movement? Describe any one of the intelligence tests used in India.

7. Describe certain changes which may be introduced into our educational aims, methods, and contents, with a view to lay the foundation for better adjusted personalities.

8. Discuss the proposition that the method of corporal punishment is neither psychological nor moral. Can you recommend any substitute form of punishment which is based on the results of recent psychological experiments?

9. Write an essay on any one of the following topics :—

- (i) Heredity and Environment as two factors in Education.
- (ii) The Influence of Fatigue on Learning.
- (iii) The Place of Sense Training in an Educational Programme.
- (iv) Instinct and Intelligence in relation to the maturing of the Nervous System.

## METHODS OF TEACHING SPECIFIC SUBJECTS AND SCHOOL MANAGEMENT

### SECOND PAPER

*Paper-Setter and Examiner—RAI SAHEB MANORANJAN MITRA, M.A.*

*The questions are of equal value*

*Answer FOUR questions from Part 1 and two questions from Part 2*

*Be brief ; you are marked for quality, not quantity*

### PART 1

1. 'The teacher of a foreign language has to convey certain definite knowledge and skill. The task of a teacher of the mother tongue is not so much to convey certain knowledge as to convey a certain attitude, to create literary appreciation, a sense of artistry in expression.' Comment on the above statement. What evils arise from defective training in the mother tongue? What steps would you take to improve the teaching of the mother tongue?

2. Write notes of a lesson for the Matriculation Class on any one of the following topics :—

- (i) Trade Routes between India and Europe.
- (ii) The Empire of Kanishka.
- (iii) The Respiratory System.
- (iv) Specific Gravity.
- (v) Sequence of Tenses.

3. Describe the use and relative advantages of maps, pictures, blackboard sketches, in teaching History and Geography.

4. Write short notes on :—

The Dalton Plan, I.Q., A.Q., the Hygiene of Reading, Spaced learning, the Project Method, the Heuristic Method.

5. To what do you ascribe the fall in the standard of English in schools? What changes in respect of text-books, teaching, and examination will improve the standard?

6. Explain clearly the relation of Nature Study to Science. Draw up a scheme of Nature Study Lessons for Class IV of a High School.

7. Of vulgar and decimal fractions which would you teach first? Give an outline of the first three lessons on fractions.

### PART 2

1. Distinguish between Vocational Education and Educational Handwork. Plan a course of Educational Handwork for the lowest class of a High School, stating clearly the underlying principles.

2. Discuss the various systems of evaluating boys' work.

What points should you bear in mind in judging the efficiency of a school?

3. How would you treat—

- (i) Obstinary, (ii) Retarded progress, (iii) Stammering, (iv) Untidiness,  
(v) Unpunctuality, (vi) Falsehood?

4. Describe the relative merits and place in a school of drill, games, gymnastics, and dancing.

## HISTORY OF EDUCATIONAL IDEAS AND METHODS

### THIRD PAPER

*Paper-Setter and Examiner*—MR. KSHETRAPAL DASGHOSH, B.A.,  
BARRISTER-AT-LAW.

*The questions are of equal value*

*Only six questions are to be attempted : FOUR should be selected from  
Group I and two from Group II*

#### GROUP I

1. What provisions were made for the moral and physical training in ancient and mediæval times of the Hindu and the Mohamèdan boy respectively? What privileges, if any, are enjoyed in these respects by the modern Indian boy over his prototypes of the past?

2. 'We are as much indebted to Athens as to Sparta for our modern system of education.' Examine this statement critically, and point out any features in our system of education which you do not find either in Athens or in Sparta.

3. 'Strictly speaking, the educational system of the Jesuits can scarcely claim a place in the history of education.' Is this scathing criticism justified?

4. 'A futile and misdirected life to the eye of the ordinary man; and yet very far from the truth.' Examine this statement with regard to Pestalozzi's life, work, and influence.

5. 'Dr. Montessori claims to be an educational thinker.' Examine critically the principles which, according to her, ought to govern the education of the child. How does her system compare with that of the Kindergarten?

6. Write notes on *any two* of the following, laying stress on the ideals, methods of teaching, and the curricula adopted in these schools :—

- (a) The Perse School, Cambridge.
- (b) Hommer Lane's Little Commonwealth.
- (c) The Decroly School in Brussels.
- (d) The Reformatory or Borstal School, Alipore.
- (e) The Calcutta Blind School.

#### GROUP II

7. What attempts have been made in India to ruralize education? Describe, in detail, the programme and methods of work of at least one school that has adopted ruralization as its ideal.

8. 'The Bengal Primary Education Act is well worth a trial.' Examine the main provisions of the Act, and point out its strong and weak features. Have you any suggestions to offer?



9. 'The interests of Secondary Education in this province will continue to suffer unless it is controlled by a Board especially constituted for that purpose.' Give, with reasons, your considered view on the problem.

10. Write notes on the following features of the English system of Education, with special reference to (1) the age of pupils, and (2) the curricula followed in these institutions :—

The Public Elementary School; The Central School; The Continuation School.

11. What provisions have been made for vocational education in German and Japanese schools, and with what results? Has India anything to learn from those results?

## SELECTED EDUCATIONAL CLASSICS

### FOURTH PAPER

*Paper-Setter and Examiner*—PROF. JNANRANJAN BANERJEA, M.A.,  
B.L.

*The figures in the margin indicate full marks*

N.B.—Answer Questions 1, 4, and 6, and only ONE of the remaining questions

1. What is the ideal of education according to Spencer? Failing this ideal, what should be the aim in education according to him? As regards training, what is the desideratum for the average man? What are the defects of intellectual culture in the system of education in vogue according to him? As regards this last question, how far do you agree with him? Give reasons for your answer. 18

2. Reproduce Spencer's observations on Object Lessons, and examine them fully. 14

Or,

What are the advantages of the method of moral culture by experience of the normal reactions? State, after Spencer, the chief maxims and rules deducible from the principles of moral education laid down by him.

3. What does Plato say about the substance and the form of the stories to be taught in training men for their work as Guardians? What does he say about music and gymnastics in connection with their education? State, after him, the duties of the Guardians. 14

Or,

According to Plato in the Republic, 'What is found in the State must be also found in the Individual. Hence we should expect to find in the individual man three principles, corresponding to the three classes of the State.' Fully develop the ideas embodied in these sentences.

4. Fully and clearly bring out Plato's thoughts about Education as explained by him in connection with the Figure of the Cave, noticing specially the purpose of education and how it can be best served. Examine his views. 18

5. Fully develop the thought contained in each of the following extracts :— 14

- (a) The development of the mind, as all other development, is an advance from the indefinite to the definite.
- (b) Nature is a strict accountant; and if you demand of her in one direction more than she is prepared to lay out, she balances the account by making a deduction elsewhere.
- (c) The faculty of dialectic can alone reveal the truth to one who is master of the sciences.

6. Write an essay on *one* of the following subjects :— 50

- (a) The place of Rousseau in the History of Educational Ideas and Methods.
  - (b) National Systems of Education in England and Japan—a comparison and a contrast.
  - (c) The Present System of Secondary Education in Bengal and how it can be improved.
  - (d) Should a Classical Language be made a compulsory subject for the Matriculation Examination of the Calcutta University?
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# M. A. Examination

## 1932

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### ENGLISH

#### FIRST PAPER

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. BIJAYGOPAL MUKHERJEE, M.A.

N B.—*Answer ANY THREE questions*

1. Trace the causes, external and internal, of the decay of Anglo-Saxon Literature, and consider its claim to be included in the history of English Literature strictly so called.

2. Write a note on the *Ballad*—its origin, subject-matter, and metrical peculiarities; and give the substance of EITHER *The Nutbrown Maid* OR *Chevy Chase*.

3. Trace the development of English prose from the time of Chaucer to the end of the 16th century.

4. Indicate the part played by native as well as foreign examples in the evolution of the regular English drama.

5. Write what you know of any two of the following :—

*The Pearl, King's Quair, Shepherd's Calendar, Apologie for Poetry, Judith, The Battle of Maldon.*

#### - SECOND HALF

*Examiner*—MR. SUHASCHANDRA RAY, M.A.

N. B.—*Answer ANY THREE questions*

1. To what do you ascribe the decline of the poetic drama after Shakespeare?

2. Indicate briefly the causes as well as the character of the change which came over English poetry about the time of the Restoration.

3. How do you account for the fact that the 19th century England found its most characteristic expression in the novel, as the Elizabethan England did in the drama?

4. Compare Tennyson and Browning from the view-point of their poetic achievement, and point out the relation in which they stand to their age.

5. Write a short critical estimate of any one of the following writers :—

Gray, Jane Austen, Landor, Arnold Bennet, Kipling.

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## SECOND PAPER

The figures in the margin indicate full marks

## FIRST HALF

Examiner—MR. RAMAPRASAD MOOKERJEE, M.A., B.L.

1. The difference between tragedy and comedy is one of point of view, 15  
of treatment rather than of subject-matter. Discuss the above, with  
special reference to *Othello* or *King Lear*.

Or,

- '*Othello* is a play of deception and of self-deception.' Discuss. 15  
2. Write a note on the characters of Dogberry and Verges and relate 15  
them to characters of the same genre in an earlier and a later play of  
Shakespeare.

Or,

- Indicate the difference in respect of the treatment of plot and 15  
character between Shakespeare's *Much Ado* and Ben Jonson's *Every Man*  
in *His Humour*.

3. Explain, with reference to the context, one passage from each of  
the following groups :—

## GROUP A

5

(a)

Come, let's away to prison ;  
We two alone will sing like birds i' the cage :  
When thou dost ask me blessing, I'll kneel down,  
And ask of thee forgiveness : so we'll live,  
And pray, and sing, and tell old tales, and laugh  
At gilded butterflies, and hear poor rogues  
Talk of court news ; and we'll talk with them too,  
Who loses and who wins ; who's in, who's out ;  
And take upon's the mystery of things,  
As if we were God's spies.

- (b) No, faith, lords and great men will not let me ; if I had a  
monopoly out, they would have part on't, and ladies too : they  
will not let me have all fool to myself ; they'll be snatching.

## GROUP B

5

- (a) Reputation is an idle and most false imposition ; oft got without  
merit, and lost without deserving : you have lost no reputation  
at all, unless you repute yourself such a loser.

(b)

I have seen the day,  
That with this little arm, and this good sword,  
I have made my way through more impediments  
Than twenty times your stop : but, O vain boast !  
Who can control his fate ?

## GROUP C

5

- (a) Is this the Roman virtue ! this the blood  
That boasts its purity with Cato's daughter !  
Would she have e're betray'd her Brutus ?

- (b) Bene : A miracle ! here's our own hands against our hearts.  
Come, I will have thee ; but, by this light, I take thee for  
pity.  
Beat : I would not deny you ; but, by this good day, I yield  
upon great persuasion, and partly to save your life, for I was  
told you were in a consumption.

## GROUP D

5

- (a) I'll be hanged an some fishmonger's son do not make of 'em,  
and puts in more fasting-days than he should do, because  
he would utter his father's dried stock-fish and stinking  
conger.
- (b) But deeds, and language, such as men do use,  
And persons, such as comedy would choose  
When she would show an image of the times  
And sport with human follies not with crimes.

## SECOND HALF

Examiner—DR. U. C. NAG, M.A. (CAL.), PH.D. (LOND.)

1. Justify or criticise the propriety of Otway's attempt 'to diversify the tragic action' in *Venice Preserved* by 'the want of morality in the original design' and by the introduction of 'despicable scenes of vile comedy.' 10

Or,

- Compare Otway's characterisation of Belvidera with that of any similar character in Shakespeare. 10

2. Elucidate any two of the following :—

- (a) Fortune, not Reason, rules the state of things,  
Reward goes backwards, Honour on his head;  
Who is not poor, is monstrous; only need  
Gives form and worth to every human seed.  
As cedars beaten with continual storms,  
So great men flourish; and do imitate  
Unskilful statuaries, who suppose,  
In forming a Colossus, if they make him  
Straddle enough, strut, and look big, and gape,  
Their work is goodly: so men merely great  
In their affected gravity of voice,  
Sourness of countenance, manners' cruelty,  
Authority, wealth, and all the spawn of fortune,  
Think they bear all the kingdom's worth before them;  
Yet differ not from those colossic statues,  
Which, with heroic forms without o'erspread,  
Within are nought but mortar, flint, and lead.  
Man is a torch borne in the wind; a dream  
But of a shadow, summ'd with all his substance;  
And as great seamen, using all their wealth  
And skills in Neptune's deep invisible paths,  
In tall ships richly built and ribb'd with brass,  
To put a girdle round about the world.  
When they have done it (coming near their haven)  
Are glad to give a warning-piece, and call  
A poor, staid fisherman, that never past  
His country's sight, to waft and guide them in:  
So when we wander furthest through the waves  
Of glassy Glory, and the gulfs of State,  
Topt with all titles, spreading all our reaches,  
As if each private arm would sphere the earth,  
We must to Virtue for her guide resort,  
Or we shall shipwreck in our safest port. 20

(b)

Mildred, I do believe a brother's love  
 For a sole sister must exceed them all.  
 For see now, only see ! there's no alloy  
 Of earth that creeps into the perfect'st gold  
 Of other loves—no gratitude to claim ;  
 You never gave her life, not even aught  
 That keeps life—never tended her, instructed,  
 Enriched her—so, your love can claim no right  
 O'er her save pure love's claim : that's what I call  
 Freedom from earthliness. You'll never hope  
 To be such friends, for instance, she and you,  
 As when you hunted cowslips in the woods  
 Or played together in the meadow hay.  
 Oh, yes—with age, respect comes, and your worth  
 Is felt, there's growing sympathy of tastes,  
 There's ripened friendship, there's confirmed esteem :  
 —Much head these make against the newcomer !  
 The startling apparition, the strange youth—  
 Whom one half-hour's conversing with, or say,  
 Mere gazing at, shall change (beyond all change  
 This Ovid ever sang about) your soul  
 ... Her soul, that is.—the sister's soul ! With her  
 'Twas winter yesterday ; now, all is warmth,  
 The green leaf's springing and the turtle's voice,  
 ' Arise and come away ! ' Come whither ?—far  
 Enough from the esteem, respect, and all  
 The brother's somewhat insignificant  
 Array of rights ! All which he knows before,  
 Has calculated on so long ago !  
 I think such love, (apart from yours and mine,)  
 Contented with its little term of life,  
 Intending to retire betimes, aware  
 How soon the background must be place for it,  
 —I think, am sure a brother's love exceeds  
 All the world's love in its unworldliness.

20

(c)

Hail the world's soul, and mine ! More glad than is  
 The teeming earth to see the long'd-for sun  
 Peep through the horns of the celestial Ram,  
 Am I, to view thy splendour dark'ning his ;  
 That lying here, amongst my other hoards,  
 Show'st like a flame by night, or like the day  
 Struck out of chaos when all darkness fled  
 Unto the centre. O thou son of Sol  
 But brighter than thy father, let me kiss,  
 With adoration, thee, and every relic  
 Of sacred treasure in this blessed room.  
 Well did wise poets, by thy glorious name,  
 Title that age which they would have the best ;  
 Thou being the best of things, and far transcending  
 All style of joy, in children, parents, friends,  
 Or any other waking dream on earth :  
 Thy looks when they to Venus did ascribe,  
 They should have given her twenty thousand Cupids ;  
 Such are thy beauties and our loves ! Dear saint,  
 Riches, the dumb god, that giv'st all men tongues,  
 That canst do nought, and yet mak'st men do all things ;  
 The price of souls ; even hell, with thee to boot,  
 Is made worth heaven. Thou art virtue, fame,  
 Honour, and all things else. Who can get thee,  
 He shall be noble, valiant, honest, wise—

20

*Mosca* : And what he will, sir. Riches are in fortune  
A greater good than wisdom is in nature.

*Volpone* : True, my beloved *Mosca*. Yet I glory  
More in the cunning purchase of my wealth,  
Than in the glad possession, since I gain  
No common way ; I use no trade, no venture ;  
I wound no earth with ploughshares, I fat no beasts  
To feed the shambles ; have no mills for iron,  
Oil, corn, or men, to grind them into powder ;  
I blow no subtle glass, expose no ships  
To threat'nings of the furrow-faced sea ;  
I turn no monies in the public bank,  
No usure private.

- (d) *Antony* : O, pardon me, thou bleeding piece of earth, 20  
That I am meek and gentle with these butchers !  
Thou art the ruins of the noblest man  
That ever lived in the tide of times.  
Woe to the hands that shed this costly blood !  
Over thy wounds now do I prophesy  
(Which, like dumb mouths, do ope their ruby lips  
To beg the voice and utterance of my tongue) :—  
A curse shall light upon the limbs of men ;  
Domestic fury, and fierce civil strife,  
Shall cumber all the parts of Italy ;  
Blood and destruction shall be so in use,  
And dreadful objects so familiar,  
That mothers shall but smile when they behold  
Their infants quarter'd with the hands of war,  
All pity chok'd with custom of fell deeds ;  
And *Cæsar's* spirit ranging for revenge,  
With Ate by his side, come hot from Hell,  
Shall in these confines, with a monarch's voice,  
Cry 'Havoc !' and let slip the dogs of war ;  
That this foul deed shall smell above the earth  
With carrion men groaning for burial.

### THIRD PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Examiner*—MR. AMIYAKUMAR SEN, M.A.

1. *Either,*

#### A

- (i) 'The poem (*Fra Lippo Lippi*) is a study of character,..... and a study of art.....It embodies the impulse that arose with the Renaissance.' 12  
Discuss the above statement with reference to illustrative passages in your text.

- (ii) Explain :—

Suppose I've made her eyes all right and blue,  
Can't I take breath and try to add life's flush,  
And then add soul and heighten them threefold?

6

Or,

B

(i) Browning presents his 'Men and Women' and their case 'from the inside, not so much as they might have seen it, still less as they might have stated it, but as it is, as the poet would see and state it for them, as they would see and know it with his power to animate them.' Criticise or justify this statement, with special reference to 'The Bishop orders his tomb at St. Praxed's Church.' 12

(ii) 'And then how I shall live through centuries,  
And hear the blessed mutter of the mass,  
And feel the steady candle-flame, and taste  
Good strong thick stupefying incense-smoke.' 6

What light do the above lines throw on the character of the Bishop?

2.

Either,

(i) Explain :— 9

O little self, within whose smallness lies  
All that man was, and is and will become,  
Atom unseen that comprehends the skies  
And tells the tracks by which the planets roam;  
That without moving, knows the joys of wings,  
The Tiger's strength, the eagle's secrecy,  
And in a hovel can consort with kings,  
Or clothe a God with his own mystery.  
O with what darkness do we cloak thy light,  
What dusty folly gather thee for food,  
Thou who alone art knowledge and delight,  
The heavenly bread, the beautiful, the Good.

(Masefield.)

(ii) Write a short note on 'The human personality as conceived by Modern English poets,' illustrating your answer by quotations from, or references to, Binyon's Selections. 9

Or,

B

(i) Explain :— 8

'Now, now, if ever, could the spirit catch,  
Beyond the ear's range, thrills of airy sound.  
I tremble, as at the lifting of a latch.  
Am I not found?  
This magical clear moment in the dusk  
Is like a crystal dewy-brimming bowl  
Imperilled upon lifting hands : I dread  
The breathing of the shadow that shall spill  
This wonder, and with it my very soul.

(Binyon.)

(ii) Trace, with reference to this and other illustrative passages in Binyon's Selections, the influence of Mysticism on Modern English poetry. 10

3. (a) 'The second book of the *Faerie Queene* covers almost the whole ground of the Aristotelian moral virtues.' Discuss the above statement. 14

Or,

(b) Show that 'the earlier cantos (of the *Faerie Queene*, Book II) deal with the painful struggles against the passions of wrath and malignity and the latter ones with the passions of desire.' 14



## SECOND HALF

*Examiner*—DR. H. C. MUKHERJEE, M.A., PH.D.

1.

*Either,*

10

How do you explain the fact that *Paradise Regained* is one of the most unread epics in the English language?

*Or,*

Discuss the statement that *Absalom* and *Achitophel* is a party pamphlet dedicated to the hour and yet immortal.

2. Give the substance of the two following sonnets. State in which of them is the leading thought more powerfully expressed :— 20

A

## SESOSTRIS

Sole Lord of Lords and very King of Kings,  
He sits within the desert, carved in stoue;  
Inscrutable, colossal, and alone,  
And ancients than memory of things.  
Graved on his front the sacred beetle clings;  
Disdain sits on his lips; and in a frown  
Scorn lives upon his forehead for a crown.  
The affrighted ostrich dare not dust her wings  
Anear this Presence. The long caravan's  
Dazed camels pause, and mute the Bedouins stare.  
This symbol of past power more than man's  
Presages doom. Kings look—and Kings despair :  
Their scepters tremble in their jeweled hands  
And dark thrones totter in the baleful air !

(Lloyd Mifflin.)

B

## OZYMANDIAS OF EGYPT

I met a traveler from an antique land  
Who said : Two vast and trunkless legs of stone  
Stand in the desert. Near them, on the sand,  
Half sunk, a shattered visage lies, whose frown  
And wrinkled lip and sneer of cold command  
Tell that its sculptor well those passions read  
Which yet survive, stamped on these lifeless things,  
The hand that mocked them and the heart that fed;  
And on the pedestal these words appear :  
'My name is Ozymandias, king of kings :  
Look on my works, ye Mighty, and despair !'  
Nothing beside remains. Round the decay  
Of that colossal wreck, boundless and bare,  
The lone and level sands stretch far away.

3. Rewrite *one* of the following in simple English, clearly pointing out its central idea :— 2

A

If they hint, O Musician, the piece that you played  
Is naught but a copy of Chopin or Spohr;  
That the ballad you sing is but merely 'conveyed'  
From the stock of the Arnes and the Purcells of yore;

That there's nothing, in short, in the words or the score,  
That is not as out-worn as the 'Wandering Jew',  
Make answer—Beethoven could scarcely do more—  
That the man who plants cabbages imitates, too!

If they tell you, Sir Artist, your light and your shade  
Are simply 'adapted' from other men's lore;  
That—plainly to speak of a 'spade' as a 'spade'—  
You've 'stolen' your grouping from three or from four;  
That (however the writer the truth may deplore),  
'Twas Gainsborough painted your 'Little Boy Blue';  
Smile only serene—though cut to the core—  
For the man who plants cabbages imitates, too!

And you too, my Poet, be never dismayed  
If they whisper your Epic—'Sir Eperon d'Or'—  
Is nothing but Tennyson thinly arrayed  
In a tissue that's taken from Morris's store;  
That no one, in fact, but a child could ignore  
That you 'lift' or 'accommodate' all that you do;  
Take heart—though your Pegasus' withers be sore—  
For the man who plants cabbages imitates, too!

Postscriptum—And you, whom we all so adore,  
Dear Critics whose verdicts are always so new!—  
One word in your ear. There were Critics before  
And the man who plants cabbages imitates, too!

## B

What poets sang in Atlantis? Who can tell  
The epics of Atlantis or their names?  
The sea hath its own murmurs, and sounds not  
The secrets of its silences beneath,  
And knows not any cadences enfolded  
When the last bubbles of Atlantis broke  
Among the quieting of its heaving floor.

O years and tides and leagues and all their billows  
Can alter not man's knowledge of men's hearts—  
While trees and rocks and clouds include our being  
We know the epics of Atlantis still:  
A hero gave himself to lesser men,  
Who first misunderstood and murdered him,  
And then misunderstood and worshipped him;  
A woman was lovely and men fought for her.  
Towns burnt for her, and men put men in bondage,  
But she put lengthier bondage on them all;  
A wanderer toiled among all the isles  
That fleck this turning star of shifting sea,  
Or lonely purgatories of the mind,  
In longing for his home or his lost love.

Poetry is founded on the hearts of men:  
Though in Nirvana or the Heavenly courts  
The principle of beauty shall persist,  
Its body of poetry, as the body of man,  
Is but a terrene form, a terrene use,  
That swifter being will not loiter with;  
And, when mankind is dead and the world cold,  
Poetry's immortality will pass.

## FOURTH PAPER

## FIRST HALF

Examiner—MR. RAJANIKANTA GUHA, M.A.

*The figures in the margin indicate full marks*

1. On what grounds does Milton base his plea for Toleration? Is he consistent in his arguments? 15

Or,

Explain, with reference to the context, four of the following passages :— 15

- (a) No envious *Juno* sate cross-leg'd over the nativity of any mans intellectual off-spring.
- (b) Assuredly we bring not innocence into the world, we bring impurity much rather : that which purifies us is trial, and trial is by what is contrary.
- (c) Truth and understanding are not such wares as to be monopoliz'd and traded in by tickets and statutes and standards.
- (d) A man may be a heretick in the truth.
- (e) From that time ever since, the sad friends of Truth, such as durst appear, imitating the carefull search that *Isis* made for the mangl'd body of *Osiris*, went up and down gathering up limb by limb still as they could find them.
- (f) Methinks I see in my mind a noble and puissant Nation rousing herself like a strong man after sleep, and shaking her invincible locks.

2. Among the six Lives you have read, 'the best are perhaps' according to Macaulay, 'those of Dryden and Pope. The very worst is, beyond all doubt, that of Gray.' 15

Examine this verdict.

Or,

'Poetry is the art,' says Johnson, 'of uniting pleasure with truth, by calling imagination to the help of reason.'

How far does Johnson apply this definition to his own estimate of Dryden's *Absalom* and *Achitophel* and Pope's *Essay on Man*?

3. Bring out, in your own language, the ideas underlying one of the following extracts :— 20

(a) It has been written, 'an endless significance lies in Work'; a man perfects himself by working. Foul jungles are cleared away, fair seedfields rise instead, and stately cities. and withal the man himself first ceases to be a jungle and foul unwholesome desert thereby. Consider how, even in the meanest sorts of Labour, the whole soul of a man is composed into a kind of real harmony, the instant he sets himself to work ! Doubt, Desire, Sorrow, Remorse, Indignation, Despair itself, all these like helldogs lie beleaguering the soul of the poor dayworker, as of every man : but he bends himself with free valour against his task, and all these are stilled, all these shrink murmuring far off into their caves. The man is now a man. The blessed glow of Labour in him, is it not as purifying fire, wherein all poison is burnt up, and of sour smoke itself there is made bright blessed flame?

(b) The sentiment of nationality is one of a group of such sentiments for which there is unfortunately no common name. Loyalties to a

country, party, a constitution, a national sovereign, a tribal chief, a church, a race, a creed, are characteristic specimens of the class. They may be ill-directed, they often are. Nevertheless it is such loyalties that make human society possible; they do more, they make it noble. To them we owe it that a man will sacrifice ease, profit, life itself, for something which wholly transcends his merely personal interests.

But it has to be observed that the kind of loyalty we call patriotism, though it expresses a simple feeling, need have no exclusive application. It may embrace a great deal more than a man's country or a man's race. It may embrace a great deal less. And these various patriotisms need not be, and should not be, mutually exclusive. As civilisation advances, it becomes more and more necessary for men to learn how loyalties are to be combined without being weakened; how a narrow provincialism is to be avoided on the one side, and a selfish indifference, masquerading under the name of enlightened cosmopolitanism, is to be shunned on the other.

## SECOND HALF

*Examiner*—N. K. SIDHANTA, M.A., B.LIT.

*The figures in the margin indicate full marks*

*Answer ANY THREE questions, of which Question No. 5 must be one*

1. 'Carlyle's was a life of the spirit, not a life of events.' Discuss 15  
how far this inner life of its author is reflected in *Sartor Resartus*.
2. Explain fully any three of the following expressions from *Sartor Resartus* :— 15
  - (a) The Everlasting No; (b) Pure reason; (c) The philosophy of clothes; (d) 'The Everlasting Yea.'
3. Puter says of Charles Lamb; 'In the making of prose he realises 15  
the principle of art for its own sake, as completely as Keats in the making of verse.' Discuss.
4. Explain any three of the following :— 15
  - (a) That the end of life is not action but contemplation—*being* as distinct from *doing*—a certain disposition of the mind : is, in some shape or other, the principle of all the higher morality.
  - (b) Shakespeare's kings are not, nor are meant to be, great men : rather, little or quite ordinary humanity, trust upon greatness, with those pathetic results, the natural self-pity of the weak heightened in them into irresistible appeal to others as the net result of their royal prerogative.
  - (c) The essential elements of the romantic spirit are curiosity and the love of beauty.
  - (d) Completeness, the perfectly rounded wholeness and unity of the impression it leaves on the mind of a reader who fairly gives himself to it—that, too, is one of the characteristics of a really excellent work, in the poetic as in every other kind of art.
5. Bring out, and examine critically, the thought contained in any 20  
one of the following passages :—
  - (a) Devotion to the head of the State in his representative capacity is a different thing from the old feudal loyalty. It is far more impersonal; the ruler, whether an individual or a council, is revered as a non-human and non-moral embodiment of the national power, a sort of Platonic idea of coercive authority. This kind of loyalty may very easily be carried too far. In reality, we are members of a great many 'social organisms',

each of which has indefeasible claims upon us. Our family, our circle of acquaintance, our business or profession, our church, our country, the comity of civilised nations, humanity at large, are all social organisms; and some of the chief problems of ethics are concerned with the adjustment of their conflicting claims. To make any one of these absolute is destructive of morality. But militarism and socialism deliberately make the State absolute. In internal affairs this may lead to the ruthless oppression of individuals or whole classes; in external relations it produces wars waged with 'methods of barbarism'. The whole idea of the State as an organism, which has been emphasised by social reformers as a theoretical refutation of selfish individualism, rests on the abuse of a metaphor. The bond between the dwellers in the same political area is far less close than that between the organs of a living body. Every man has a life of his own and some purely personal rights; he has, moreover, moral links with other human associations, outside his own country, and important moral duties towards them. No one who reflects on the solidarity of interests among capitalists, among hand-workers, or in a different way, among scholars and artists, all over the world, can fail to see that the apotheosis of the State, whether in the interest of war or of revolution, is an anachronism and an absurdity.

(b) Too much painstaking speaks disease in one's mind, as well as too little. The adroit sound-minded man will endeavour to spend on each business approximately what of pains it deserves and with a conscience void of remorse will dismiss it then. All this in favour of easy-writing shall be granted, and if need were, enforced and inculcated. And yet, on the other hand, it shall not less but more strenuously be inculcated, that in the way of writing, no great thing was ever, or will ever be done with ease, but with difficulty! Let ready-writers with any faculty in them lay this to heart. Is it with ease, or not with ease, that a man shall do his best, in any shape; above all, in this shape justly named of 'soul's travail,' working in the deep places of thought, embodying the True out of the Obscure and Possible, environed on all sides with the uncreated False? Not so, now or at any time. The experience of all men belies it; the nature of things contradicts it. Virgil and Tacitus, were they ready-writers? The whole Prophecies of Isaiah are not equal in extent to this cobweb of a Review Article. Shakespeare, we may fancy, wrote with rapidity; but not till he had thought with intensity: long and sore had this man thought, as the seeing eye may discern well, and had dwelt and wrestled amid dark pains and throes, though his great soul is silent about all this. It was for him to write rapidly at fit intervals, being ready to do it. And herein truly lies the secret of the matter: such swiftness of mere writing, after due energy of preparation, is doubtless the right method; the hot furnace having long worked and simmered, let the pure gold flow out at one gush. It was Shakespeare's plan; no easy-writer he, or he had never been a Shakespeare. Neither was Milton one of the mob of gentlemen that write with ease; he did not attain Shakespeare's faculty, one perceives, of even writing fast after long preparation, but struggled while he wrote. Goethe also tells us he 'had nothing sent him in his sleep'; no page of his but he knew well how it came there. It is reckoned to be the best prose, accordingly, that has been written by any modern. Dante sees himself 'growing lean' over his Divine Comedy; in stern solitary death-wrestle with it, to prevail over it, and do it, if his uttermost faculty may: hence, too, it is done and prevailed over, and the fiery life of it endures forevermore among men. No: creation, one would think, cannot be easy; your Jove has severe pains, and fireflames, in the head out of which an armed Pallas is struggling!

GROUP A  
FIFTH PAPER  
CHAUCER TEXTS

*The figures in the margin indicate full marks*

FIRST HALF

*Examiner*—DR. S. K. CHATTERJI, M.A., D.LITT.

1. Explain four of the following passages, referring to the context 20  
(Select two from each group) :—

GROUP I

- (1) What sholde he studie, and make hymselfen wood,  
Upon a book in cloystre alwey to poure,  
Or swynken with his handes and laboure  
As Austyn bit ? How shal the world be served?  
Lat Austyn have his swynk to him reserved.
- (2) Wel koude he in exchaunge sheeldes selle.  
This worthy man ful wel his wit besette,  
Ther wiste no wight that he was in dette,  
So estatly was he of his governaunce,  
With his bargaynes, and his chevyssaunce.
- (3) For he was grounded in astronomye,  
He kepte his pacient a ful greet deel  
In houres by his magyk natureel;  
Wel koude he fortunen the ascendent  
Of his ymages for his pacient.
- (4) He sette nat his benefice to hyre  
And leet his sheep encombred in the myre,  
And ran to Ioudoun, vnto Sainte Poules,  
To seken hym a chauntrie for soules,  
Or with a bretherhed to been withhelde.
- (5) A vernycle hadde he sowed vpon his cappe;  
His walet lay bifore hym in his lappe  
Bretful of pardoun, comen from Rome al hoot.

*And in his male he hadde a pilwebeer  
Which that he seyde was our ladye .vj.l.*

GROUP II

- (6) I pose that thow louedest hir bifore,  
Wostow not wel the olde clerkes sawe,  
That ' Who shal yeue a louere any lawe?  
Loue is a gretter lawe, by my pan,  
Than may be yeue to any erthely man?
- (7) Nat was foryeten the porter Ydelnesse,  
Ne Narcisus the faire of yore agon,  
Ne yet the folye of kyng Salamon,  
Ne yet the grete strengthe of Ercoles,  
Thenchauntementz of Medea and Circes.....
- (8) And right anon swich strief is ther bigonne  
For thilke grauntynge in the heuene aboue  
Bitwixe Venus, the goddesse of loue,  
And Mars, the stierne god armypotente,  
That Iuppiter was bisy it to stente.

- (9) And lat no gentil woman her assure  
To putten her in swiche an aventure.  
But god forbede but a woman can  
Been as trewe and louyng as a man !  
And, for my part, I shal anon it kythe !
- (10) But natheles, our autour telleth us,  
That Cupido, that is the god of love,  
At preyere of his moder, hye above,  
Hadde the lyknes of the child ytake,  
This noble quene enamoured to make  
On Eneas.
2. Write etymological notes on ten of the following words and expressions : *alderbest, bachelor, chivauchie, colpons, Yeman, squier, clerk, lady, lord, in a throwe, yeldchalle, covyne, assoulyng, caytiues, ventusyng, uncouth, sweuene, halwes, sithen, knaue, lodemenage, no maner wight, harnaised, sautrie, chapman.* 10

3. Answer two of the following questions :—

20

- (i) 'Chaucer is the first of our English humorists.' Illustrate this with special reference to the *Prologue to the Canterbury Tales*.
- (ii) 'An exalted romance, and a realism which keeps touch with the earth—we get both in Chaucer.' Discuss.
- (iii) 'We meet with the foretaste of the Renaissance in Chaucer.' Show how far this statement is correct.
- (iv) 'Chaucer, the well of English undefiled.' Justify this remark, and indicate the position of Chaucer in the history of the English language and the development of Modern English.

## SECOND HALF

*Examiner*—MR. NALINIMOHAN CHATTERJI, M.A.

1. Translate into Modern English prose two of the following passages :— 40

- (a) 'Sir clerk of Oxenford,' our hoste sayde,  
'Ye ryde as coy and stille as dooth a mayde,  
Were newe spoused, sitting at the bord;  
This day ne herde I of your tonge a word.  
I trowe ye studie aboute som sophyme,  
But salomon seith, "every thing hath tyme".  
For goddes sake, as beth of bettre chere,  
It is no tyme for to studien here.  
Telle us som mery tale, by your fey;  
For what man that is entred in a pley,  
He nedes moot unto the pley assente.  
But precheth nat, as freres doon in Lente,  
To make us for our olde synnes wepe,  
Ne that thy tale make us nat to slepe.'
- (b) But o word, lordinges, herkneþ er I go :—  
It were ful hard to finde now a dayes  
In al a toun Grisildes thre or two;  
For, if that they were put to swiche assayes.  
The gold of hem hath now so badde alayes  
With bras, that thogh the coyne be fair at yō,  
It wolde rather breste a-two than plye. (= bend.)  
For which heer, for the wyves love of Bathe,  
Whos lyf and al hir secte god mayntene  
In heigh maistrye, and elles were it scathe,

I wol with lusty herte fresshe and grene  
 Seyn yow a song to glade yow, I wene,  
 And lat us stinte of earnestful matere :—  
 Herkneth my song, that seith in this manere.

- (c) The ministre and the norice unto vyces,  
 Which that men clepe in English ydelnesse,  
 That porter of the gate is of delycles,  
 T'eschue, and by hir contrarie hir oppresse,  
 That is to seyn, by leueful bisnesse,  
 Wel oghten we to doon al our entente,  
 Lest that the feend thurgh ydelnesse us hente.  
 For he, that with his thousand cordes alye  
 Continuelly us waiteth to biclappe,  
 Whan he may man in ydelnesse espye,  
 He can so lightly cacche him in his trappe,  
 Til that a man be hent right by the lappe, (= *lappet*)  
 He nis nat war the feend hath him in honde;  
 Wel oughte us werche, and ydelnes withstonde.

2. Attempt any one of the following :—

10

- (a) The Latin element in the English language.  
 (b) The history of the Personal and the Demonstrative Pronoun.  
 (c) Shakespeare's English.  
 (d) The influence of the Bible on the English language.

### SIXTH PAPER

*The questions are of equal value*

*Answer THREE questions in EACH half*

#### FIRST HALF

*Examiner*—MR. KUMUDBANDHU ROY, M.A.

1. Discuss Wordsworth's ideas about the aim of poetry, the necessity or otherwise of metrical arrangement in it, and the language appropriate to it.

2. What is your opinion about Coleridge's attitude towards Nature? Is it the same as Wordsworth's? Illustrate by references to the works of both the authors.

3. Jeffrey commenting on Scott's poetry said that he 'never expressed a sentiment which it can cost the most ordinary reader any exertion to comprehend.' Discuss.

4. What, in your opinion, is Byron's chief message? What temporary demerits tended to make his poetry immediately popular? What permanent elements of interest are there in his poetry?

5. What were the prominent artistic and literary enthusiasms of Keats? Base your opinion on references to his poetry.

#### SECOND HALF

*Examiner*—PROF. JAYGOPAL BANERJEE, M.A.

*Only THREE questions are to be attempted*

1. Illustrate one of the following :—

- (a) Coleridge's power of lending the force of reality to the imaginary.  
 (b) Wordsworth's reverence for the dignity of individual personality.  
 (c) Byron's anti-social attitude in his relations to Nature.



2. Write a critical note on Shelley's imagery or Keats' colour-sense.
3. Discuss *one* of the following :—
  - (a) Shelley pierced through things to their spiritual essence.
  - (b) Byron's early work is generally emotional and romantic while his later work becomes more intellectual.
4. Critically examine *one* of the following statements :—
  - (a) Love was the only law Shelly recognised.
  - (b) Byron's philosophy of life is based on his sense of the futility of life.
  - (c) Till the time of *The Fall of Hyperion*, that is, towards the end of his poetic career, there was a strife in Keats' mind between his inclination to luxury and his aspiration as a humanitarian idealist.
5. Give a critical estimate of *any two* of the following poems :—
  - (1) *Isaodamia*, (2) *Dejection: An Ode*, (3) *Ode to a Nightingale*, and (4) *Hymn to intellectual Beauty*.

## SEVENTH PAPER

## FIRST HALF

*Examiner*—DR. MOHINIMOHAN BHATTACHARYYA, M.A., B.L., PH.D.

*Answer ANY THREE of the following questions*

1. 'Carlyle valued might, but not success.' Discuss this statement.
2. Compare Carlyle and Macaulay as essayists and as masters of English prose.
3. 'In making sweetness and light to be characters of perfection, culture is of like spirit with poetry, follows one law with poetry.' (*Culture and Anarchy*.) Examine this with reference to Matthew Arnold's theory of poetry.
4. Trace the influence of the reaction against Rationalism on English prose literature of the period 1835-1870.
5. Newman's 'English flows on with such limpid simplicity that its excellence escapes attention; but the finest distinction, the most elusive subtlety, easily finds expression.' Explain and illustrate this, and compare Newman's style with Matthew Arnold's.

## SECOND HALF

*Examiner*—MR. PRIYARANJAN SEN, M.A.

*The questions are of equal value*

*Answer ANY THREE questions*

1. Explain the title 'Unto this last,' and comment on the following statement with reference to Ruskin's art-criticism :—  
'In all the many forms of teaching which Ruskin undertook, the manufacture of souls.....was his chief end.'
2. Compare Dickens and Thackeray in respect of their outlook on life.
3. 'Jane Eyre occupies the same place in the history of fiction as the Lyrical Ballads in the history of poetry.'  
Elucidate the above statement.

4. 'George Eliot is never so impressive as when she is showing us the tragedies which spring from neglected duties.'

Explain this with reference to any of the novels of George Eliot that you have read

5. Write notes on *any four* of the following characters :—

Sidney Carton, Sam Weller, St. John Rivers, Hetty Sorrel, Dobbin, Rawdon Crawley.

## GROUP B

### FIFTH PAPER

(Old English Texts and Unseens)

*The figures in the margin indicate full marks*

### FIRST HALF

*Examiner*—PROF. S. K. CHATTERJI, M.A., D.LIT.

1. Render into Modern English *three* of the following passages, 21  
with grammatical or philological notes on the words in *italics* :—

(i) Ðā *gemunde* ic hū sio æ wæs ærest on Ebreiscgeþiode funden, ond eft, Ðā hie *Crēacas* geliornodon, Ðā wendon hie hie on hiora āgen geþiode ealle, ond eac ealle oðre *bēc*. Qnd eft *Lædenware* swā same, siððan hie hie geliornodon. hie hie wendon ealle þurh wise wealhstodas on hiora āgen geþi de. Qnd eac ealle oðra Cristena þioda sumne dæl hiora on hiora āgen geþiode wendon.

(ii) Qnd ðeah *sindon* monige suiðe suiðe to ðrēa;eanne, ðonne hie selfe *nyllað* ongiestan hiora scylda, Ðæt hī ðonne gchēien ðrēageude of ðæs lāriowes mūðe hū micle byrðenne hie habbað on hiora scyldum; ðonne hie willað him selfum Ðæt yfel Ðæt hie *þurh-tugon* to suiðe gelihtan, Ðæt hie ðonne ondæden for ðæs lāreowes ðrēaunga Ðæt hie hit him gehæfegigen.

(iii) Wæs hē se monn in weoruldhāde *geseted* oðp Ðā tīde þe hē wæs gelyfedre *gīdo*, and hē næfre æwig lēoð geleornade: and hē for þon oft in gebēorscipe, þonne pær wæs blisse *intinga gedēmed*, þæt hie ealle sceolden þurh *endebyrdnesse* be hearpan singan, þonne hē geseah þā hearpan him nēalæcan. þonne ārās hē for scome from þæm symble, and hām eode to his hūse.

(iv) Rachel *hätte* Iacobes wif, Ðæs beahfæderes, and heo getæcnode Godes gelaðunge, þe bewēpð hīre gästlican cild; ac heo *nele* swā becn gefrefrod, þæt hī eft to woruldlicum *gecampe* gehwyrfon þā þe æne mid *sygefæstum* deaðe middangeard oferswiðdon and his yrmða ætwundon to wuldorbeagienne mid Criste.

(v) And lā hū mæg mære scamu þurh Godes yrrē mannum gelimpan þonne us dēð gelōme for āgenum *gewyrhtum*? Ðeah præla hwylc hlāforde æthlēare, and of cristendōme to wicinge weorðe, and hit æfter þām eft geweorðe þæt wæpngewrixl weorðe gemæne þegene and þrlæa; gyf præl þæne þegen fullice afylle, līge *ægylda* ealre his mægðe.

2. Answer *one* of the following :—

(i) Write etymological and grammatical notes on *nine* of the following words: gisel, Tēmes, Hierusalēm, hrān. untwēgendlice, eyle, earnian, hūel, gyden. fýsan, betub, cwēn, hēt, hælt, iergþu lāst sibb, strēngra, wēofod.

(ii) Briefly compare and contrast Alfred the Great, Aelfrie and Wulfstan as prose writers.

(iii) Write a note on the orthography of Old English. How far are Old English MSS. represented in the printed editions? What new devices are followed to supplement the orthography of the MSS.?

(iv) Write a brief sketch of Alfred the Great's services to English literature.

3. Translate into Modern English the following unseen passage :—

20

Æfter ðam ðe Moyses se mæra heretoga of Ægypta lande mid his leode ferde, and ofer ða Readan Sæ siððon mid fotum, and becomon to ðam westene (=wilderness), þa wæn him on swiðe Amalech se cyning mid his leode feohtend. þa cwæð Moyses to þam cenan Iosue (=Joshua): 'geceos ðe nu weras, and gewend tomergen togeanes Amalech, and win him on swyðe: ic sylf wille standan on ðisum steapum munte, hæbbende me on handa þa halgan Godes gyrde (=rod)'. Iosue þa ferde and feaht wið Amalech, and Moyses ða astáh to þam sticlan (=rugged) munte mid Aarone and Húr, þone Ælmihtigan to biddenne. Þa ahefde Moyses his handa on gebædum, and Iosue hæfde sige and sloh ða hæðenan.... Swa oft swa Moyses ahefde his handa on gebedum, swa hæfde Iosue heofonlicne fultum.

## SECOND HALF

*Examiner*—MR. NALINIMOHAN CHATTERJI M.A.

*Answer Question 1 and ANY TWO of the other questions*

1. Translate into Modern English prose :—

20

Nu ic on mæðma hord minne bebohte  
frode feorh-lege, fremmað gena  
leoda þearfe; ne mæg ic her leng wasan.  
Hatað heaðo-mære hlæw gewyrcean,  
beorhtne æfter bæle æt brimes nosan,  
se scel to gemyndum minum leodum  
heah hlifan on Hrones næsse,  
þæt hit sæ-liðend syððan hatan  
Biowulfes biorh, ða ðe brentingas  
ofer floda genipu feorra drifað.

2. Translate into Modern English prose :—

15

Paðær wendon forð wlane þegenas,  
unearge menn efston georne:  
hi woldon þa ealle oðer twæga,  
lif forlætun oððe læofne gewrecan.  
Swā hi bylde forð bearn Ælfrices,  
wiga wintrum geong, wordum mælde,  
Ælfwine þa cwæð (hē on ellen spræc):  
'Gemunað þara mæla, þa wē oft æt meodo spræcon,  
þonne wē on þence bēot āhofon,  
Læleð on healle, ymbe heard gewinn:  
nū mæg cunnian hwā cēne sy.'

Discuss the internal evidence as to the date of composition of *The Battle of Maldon*.

## 3. Translate into Modern English prose :—

16

Ealles ðæs Iūðith sægde  
 wuldor weroda Dryhtne, þe hyre weorðmynde geaf,  
 mārðe on moldan rice, swylce eac mæde on heofonum,  
 sigorlean in swegles wuldore þæs ðe heo ahte sōðne gelēasan  
 [ā] tō ðām Ælmihtigan; hūru æt þām ende ne twēode  
 þæs lēanes þe heo lange gyrnde. þæs sy ðām lēofan Dryhtne  
 wuldor tō wīdan aldre, þe gesceōp wind and lyfte,  
 roderas and rūme grundas, swylce eac rēpe strēamas  
 and swegles drēamas þurh his sylfes miltse.

Mention the characteristics of later Anglo-Saxon poetry.

## 4. (a) Translate into Modern English prose :—

11

þær ne hægl ne hrīm hrōsað tō foldan,  
 ne wīnding wolcen, ne þær wæter fealleþ  
 lyfte gebysgad; ac þær lagustrēamas,  
 wundrum wrtætlice wyllan onspringað,  
 fægrum foldwylmum foldan lēccaþ.  
 wæter wynsumu of þæs wuda midle,  
 þā mōnþa gehwām of þære moldan tyrf  
 brimcald brecað, bearo ealne geondfarað  
 þrægum þrymlice : is þæt peodnes gebod  
 þætte twelf sibum þæt tīrfæste  
 lōnd geondlāce lagufōða wynn.

(b) Write a brief note on the metrical laws which govern Old English verse; or, Scan any three lines of the above passage.

## SIXTH PAPER

Examiner—PROF. H. K. BANERJI, M.A., B.LITT.

## FIRST HALF

*The figures in the margin indicate full marks*

1. Indicate the extent of Chaucer's indebtedness to Boccaccio in *Troilus and Criseyde* and *the Knights Tale* and comment on the following :— 12

'It was by translating and reshaping the *Teseide* and the *Filostrato* that Chaucer first introduced into English poetry a richness and passion both characteristic of the great Southern literature.'

Or,

Examine the following statement :—

'The characteristics of Chaucer's pilgrims are solely those of their sex, their age or their calling.' How would you account for the greater realism to be found in Chaucer's pictures than in those of Gower and Langland?

## 2. Explain any three of the following extracts, adding etymological and other notes where necessary :— 18

- (a) Now mighte som envyous jangle thus,  
 'This was a soðeyn love, how mighte it be  
 That she so lightly lovede Troilus  
 Right for the firste sighte; ye, pardee?  
 Now who-so seyth so, mote he never thee!  
 For every thing, a ginning hath it nede  
 Er al be wrought, withouten any drede.

- (b) But prively somtyme yit they mette  
 By sleighte, and speken som of hir desyr,  
 As, wry the gleed, and hotter is the fyr;  
 Forbode a love, and it is ten so wood.  
 This wal, which that betwix hem bothe stood,  
 Was cloven a two, right fro the toppe adoun,  
 Of olde tyme of his fundacioun;  
 But yit this clifte was so narwe and lyte  
 It nas nat sene, dere y-nogh a myte.
- (c) He yaf nat of that text a pulled hen,  
 That seith, that hunters been nat holy men;  
 Ne that a monk, whan he is cloisterlees,  
 Is likned til a fish that is waterlees;  
 This is to seyn, a monk out of his cloistre.  
 But thilke text held he nat worth an oistre.  
 And I seyde his opinioun was good.  
 What sholde he studie, and make himselven wood,  
 Upon a book in cloistre alwey to poure,  
 Or awinken with his handes, and laboure,  
 As Austin bit ? How shal the world be served ?
- (d) And if he fond owher a good felawe,  
 He wolde techen him to have non awe,  
 In swich cas, of the erchedeknes curs,  
 But-if a mannes soule were in his purs;  
 For in his purs he sholde y-punished be.  
 'Purs is the erchedeknes helle,' seyde he,  
 But wel I woot he lyed right in dede.
- (e) Into a studie he fil al sodeynly,  
 As doon thise lovers in hir queynle geres,  
 Now in the croppe, now down in the breres,  
 Now up, now down, as boket in a welle.  
 Right as the Friday, sothly for to telle,  
 Now it shyneth, now it reyneth faste,  
 Right so can gery Venus overcaste  
 The hertes of hir folk; right as hir day  
 Is geiful, right so chaungeth she array.

3. Render two of the following extracts into Modern English :—

20

(a) The seconde partie of penitence is cofession, that is signe of contricion. Now shul ye understonde what is confession, and whether it oghte nedes be doon or noon, and whiche thinges been covenable to verray confession.

First shaltow understonde that confession is verray shewing of sinnes to the preest; this is to seyn 'verray,' for he moste confessen him of alle the condiciouns that bilongen to his sinne, as ferforth as he can. Al moot he seyd, and no thing excused ne hid ne forwrapped, and noght avaunte him of his gode werkes. And forther over, it is necessarie to understonde whennes that Sinnes springen, and how they encreesen, and whiche they been.

- (b) O moral Gower, this book I directe  
 To thee, and to the philosophical Strode,  
 To vouchen sauf, ther nede is, to correcte,  
 Of your benigneites and zeles gode.  
 And to that sothfast Crist, that starf on rode,  
 With al myn herte of mercy ever I preye;  
 And to the lord right thus I speke and seye:  
 Thou con, and two, and three, eterne on-lyfe,  
 That regnest ay in three and two and non,  
 Uncircumscrip, and al mayst circumscrieve,

Us from visible and invisible foon  
 Defende; and to thy mercy, everichoon,  
 So make us, Jesus, for thy grace digne,  
 For loue of mayde and moder thyn benigne!

- (c) And as for me, thogh that I can but lyte,  
 On bokes for to rede I me delyte,  
 And to hem yeve I feyth and ful credence,  
 And in myn herie have hem in reverence  
 So hertely, that ther is game noon  
 That fro my bokes maketh me to goon,  
 But hit be seldom, on the holy day;  
 Save, certeyuly whan that the month of May  
 Is comen, and that I here the foules singe,  
 And that the floures ginnen for to springe,  
 Farwel my book and my devocioun!

## SECOND HALF

1. Render into Modern English *any four* of the following passages, 20  
 adding grammatical and etymological notes, where necessary:—

- (a) Heo was þe gladir vor þe rise,  
 Arð song a vele cunne wise:  
 Bet þušte þe drem þat he were  
 Of harpe and pipe, þan he nere,  
 Bet þušte þat he were i-shote  
 Of harpe and pipe þan of prote.

(b) Of þeos seoue bestes, & of hore streones ide wilderness, & of onlicha liue, is iscid hiderto, — þet alle þe uordfarinde uorded to uordonne  
 Þe Liun of Prude slead alle þe prude, & alle þeo þet beoð heie, & ouer heie  
 iheorted. Þe attri neddre alle þeo outfulle, & alle þeo ludere idoncked  
 Þe vnicorne alle þeo wredfule; & al-so of þe odre areawe. Ase to God heo  
 beoð isleiene; auh heo libbed to þe uonde. & beoð alle ine his hirde, &  
 serued him ine his kurt, euerichon, of þet wester, þet him to ualled.

- (c) Heo libþ a eyn þe lawe . and letteþ so faste,  
 Þas Feip may not han his forþ . hir Florins gon so þikke.  
 Heo ledeþ þe lawe as hire luste . & lone-dayes makeþ,  
 Þe Mase for a Mene mon . þan 3 he mote eue.  
 Lawe is so lordlich . and loþ to maken eende,  
 With-uten presentes or pons . heo pleseth ful fewe.  
 Clergye an couetise . heo coupleþ to-gedere.

- (d) Bot yhit can som men, þat er sleghe,  
 Witte if he sal of þat yuel deghe  
 By certayn takens, als yhe sal here,  
 Þat byfalles when þe dedes nere;  
 Þan bygynnes his frount downward falle,  
 And his browes heldes down wyth-alle.

- (e) Nihtes when y wende & wake,  
 For-þi myn wonges waxeþ won;  
 Leuedi, al for þine sake  
 Longinge is ylent me on.  
 In world nis non so wyter mon  
 Þat al hire bounté telle con;  
 Hire swyre is whittore þen þe swon,  
 & feyrest may in toun.

- (f) I Font þere Freres . all þe Foure Ordres,  
 Prechinge þe peple . for profyt of heore wombes,  
 Gloasyng þe Gospel . as hem good likeþ,  
 For couetyse of copes . contrueþ hit ille;  
 For monye of þis Maistres . mowen clopen hem at lyking,  
 For Moneye & heore Marchaundie . meeten ofte togedere.

2. Write a short essay on the vogue of Allegory in Medieval English literature. 10

Or,

Write brief notes on the literary characteristics and importance of two of the following :— 10

(a) *The Ormulum*; (b) *Layamon's Brut*; (c) *Cursor Mundi*; (d) *Ham-pole's The Prick of Conscience*.

Or,

'After reading *Piers Plowman* none can think of Merry England.' Discuss. 10

3. Render into Modern English one of the following passages :— 20

- (a) To him þai makked grete maistri,  
And proued to ger þe bare abyde.  
Thurgh might of God & mild Mari,  
þe bare abated all þaire pride.  
Mekill pride was þare in prese,  
Both on pencell and on plate,  
When þe bare rade with-outen rese  
Vnto cane þe graythest gate.  
þare fand ho folk bifor þe 3ate  
Thretty thowsand stif on stede.  
Sir John of France come at to late;  
þe bare has gert þaire sides blede.
- (b) Bot þat oþer wrake þat wex . on wy3e3 hit ly3t  
þur3 þe faut of a freke . þat fayled in trawpe,  
Adam in-obedynt . ordaynt to blysse;  
þer pryuely in paradys . his place wat3 de-vised,  
To lyue þer in lyknyng . þe lenþe of a terme,  
& þenne en-herite þat home . þal aungele3 for-gart.  
Bot þur3 þe eggyng of Eue . he ete of an apple,  
þat en-poysened alle pople3 . þat parted fro hem boþe,  
For a defence. þat wat3 dy3t. dry3tyn seluen,  
& a payne þer-on put . & pertly halden.  
þe defence wat3 þe fryt . þat þe freke towched,  
& þe dom is þe deþe . þat drepe3 vus alle.

## SEVENTH PAPER

### FIRST HALF

Examiner—MR. SUHASCHANDRA RAY, M.A.

The figures in the margin indicate full marks

Answer Question 1 and two other questions

1. Translate into Modern English any two of the following passages, adding grammatical or etymological notes on the words italicised :— 20

(a) Duþ ē qīþa izwis : ni maūrdni þ sáiwalái izwarái hva matjáiþ jah hva drigkáiþ, nih leika izwaramma hve was:áíþ; niu sáiwala máis ist fōdeindí jah leik wastjōm ? Insaíþviþ du fuglam himins þei ni saiaand nih sneiþand, nih lisand in banstins, jah atla izwar sa ufar himinam fōdeiþ ins. Niu jus máis *wulþrizans* sijnþ þnim?

(b) Ip þō skōhsla bādun ina qīþondans : jabaí uswaírpis uns, usláubei uns galeiþan in þō haířda sweinē. Jah gaþ du im : gaggiþ ! Ip eis usgaggandans galiþun in haířda sweinē; jah sái, run *gawaúrhtēdun* eis alla sō haířda and driusōn in marein, jah gadáuþnōdēdun in *watnam*.

(c) Jah qaþ im Iēsus : ibái magun sunjus *bruþfadis*. und þatei miþ im ist bruþfaþs, fastan? Swa lagga hveila swē miþ sis haband bruþfaþ, ni magun fastan. Aþþan aigaggand dagōs þan *afnimada* af im sa biuþfaþs, jah þan fastand in jáinamma daga.

(d) Miþþaneī þan sagq sunno, allái swa managái swē habáidēdun siukans seúhtim missaleikáim, *brāhtēdun* ins at imma : iþ is áinhvar-jammēh izē handuns analagjands gabáilida ins. Usiddēdun þan jah unhulþōns af managáim brōþjandeins jah qipundeins þatei þu is Xristus, sunus guþs. Jah gasakands im ni *latlōt* þōs rōdjan, untē wissēdun silban Xristu ina wisan.

2. Give the Old English equivalents, and account for differences, if any, of *any six* of the following words— 15

*wasjáiþ, sneiþund, sathviþ, hatrda, driusōn, latlot, mǣis, (us)lduþei, (us)iddjedun.*

3. Explain and illustrate the First Sound-shifting (popularly called Grimm's Law). 15

4. Give a brief philological account of the Preterite-Present verbs in Old English. 15

5. Give the grammatical forms in Gothic and Old English of :— 15  
*either, the Personal Pronoun ; or, the Substantive Verb.*

## SECOND HALF

*Examiner*—MR. NALINIMOHAN CHATTERJI, M.A.

*Answer ANY THREE questions*

1. Show how Teutonic and Aryan types are reconstructed
2. Discuss the various causes of sound change.
3. (a) Trace the origin of the Modern English suffixes -red, -ish, -meal, -long, -ry.  
(b) Write notes on : she, one, some, naught, whether.
4. Discuss the development of modern standard English.
5. Write a historical note on the verb-system in Modern English.
6. Discuss the various foreign elements in the vocabulary of Modern English, other than French and Latin.

## EIGHTH PAPER

(ESSAY)

*Examiners*—{ MR. K. C. MUKHERJEE, M.A.  
PROF. J. R. BANERJEE, M.A., B.L.  
,, JAYGOPAL BANERJEE, M.A.

*The figure in the margin indicates full marks*

Write an essay on *one* of the following subjects :—

100

- (1) Poetry, Art, and Religion.
- (2) Robert Louis Stevenson or John Galsworthy—an appreciation.
- (3) The influence of English literature on the life and thought of **Modern India**.
- (4) The unity of the human race as revealed in literature.
- (5) The Greek spirit in English literature.
- (6) The study of language as an intellectual discipline.



## SANSKRIT

## FIRST PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner—MM. PANDIT SITARAM SHASTRI*

*Full marks—50*

प्रथमं प्रश्नं समुत्तीर्यावशिष्टानां मध्ये किमपि द्वयं व्याख्यायताम् ।

1. इन्द्रस्य नु वीर्याणि प्रवोचं यानि चकार प्रथमानि वज्री ।

20

अहन्नहिमन्वपस्ततर्दं प्रवृक्षणा अभिनत्पर्व तानाम् ॥१॥

वधीहिं दस्युं धनिनं घनेन एकश्चरन्नुपशाकेभिरिन्द्र ।

धनोरधि विषुणक् ते व्यायन्नयज्वानः सनकाः प्रेतिमीयुः ॥२॥

त्वं नो अग्ने सनये धनानां यशसं कारु कृणहि स्तवानः ।

ऋध्याम कर्मापसा नवेन देवैर्द्यावापृथिवी प्रावतं नः ॥३॥

सूद्धा दिवो नाभिरग्निः पृथिव्या अथाभवदरती रोदस्योः ।

तं त्वा देवासो जनयन्त देवं वैश्वानरो ज्योतिरिदर्याय ॥४॥

अधि पेशांसि वपते नृत्तुरिवापोऽंते वक्ष उस्त्रेव बर्ज हम् ।

ज्योतिर्विश्वस्मै भुवनाय कृष्वती गावो न व्रजं द्युषा आवर्तमः ॥५॥

तद्वा नरा शंस्य राध्यं चाभिष्टिमन्नासत्या वरूथम् ।

यद्विद्वासा निधिमिवापगूळं हमुद्गतादूपथुर्वन्दनाय ॥६॥

ऋषिच्छन्दो-दैवत-निर्देशपुरस्सरं यथाभाष्यं किमपि ऋग्वयं  
व्याख्यायताम् । षष्ठमन्त्रविषयकः कथाभाग उल्लिख्यतां च ।

2. मित्रं हुवे पूतदक्षं वरुणं च रिशादसम् ।

15

धियं घृतार्ची साधन्ता ॥१॥

अत्र पूतदक्षत्वरिशादस्रवविशेषणयोर्मित्रावरुणोभयसाधारण्यं भवितुमर्हति न वा ? वृष्टिकर्मण ऐन्द्रत्वेन कथमत्र वर्षणकारितया द्वितीयाह्न्याख्यानम् ? अपि नामात्र द्वितीयाह्न्यस्य भाष्यापेक्षयार्थान्तरस्यापि संभवः ? यदि तथा, सूपपत्तिप्रदर्शयताम् । मन्त्रश्चायं व्याख्यायताम् ।

3. निज्योतिषा तमसो गा अदुक्षत् । द्यौर्न प्रथिना शवः ॥

15

अत्र ज्योतिषा साधनेन तमःसकाशतो गवां दोहनवचनं सूपपाद्यताम् । नशब्दार्थं च सप्रमाणं प्रदर्श्य,

‘व्यूढस्य द्वितीये छन्दोमे वैश्वदेवशस्त्रे सावित्रश्चतस्रः ।’ इति भाष्यपरुक्तेराशयः सम्यगुल्लिख्यताम् ।

4. या वां कशा मधुमत्यश्चिना सूनुतावती ।

15

तया यज्ञं मिमिक्षतम् ॥१॥

अत्र सूनुतावतीशब्देन कोऽर्थः प्रतिपाद्यते ? कशा-सूनुतावतीशब्दयोः कस्य कुतो वा विशेष्यबोधकत्वम् ? सूनुतावतीशब्दस्य विशेष्यपरत्वपक्षे मन्त्रार्थं व्याख्याय, कशासूनुतावतीशब्दयोर्विशेष्यपरतादशायां संपद्यमानयोर्मन्त्रार्थयोरत्र कस्य कुतो वोचितत्वमिति सहेतुकं प्रतिपाद्यताम् ।

5. सवितुः स्वरूपं निर्णीय तस्य हिरण्यपाणित्वविषयिणीमाख्यायिकां 15  
भाष्योक्तां विलिख्य तदुपपत्तिप्रदर्शनपुरस्सरं, “विश्वे देवास आगतः” इत्यत्र सप्रमाणमुदात्तादयः स्वराः संसाध्यन्ताम् ।

6. समूळहम् । सकमन् । काष्ठानाम् । जलुलः । चोधूयमाणः । 15  
इली-विशस्य । वृक्तवर्हिषः । चनस्यतम् । घृताचीम् । सासह्याम् ।  
मुमुग्धि । व्युत्पत्तिप्रदर्शनपुरस्सरमेषामर्था विलिख्यन्ताम् ।

7. प्रणो देवी सरस्वती वाजेभिर्वाजिनीवती । धीनामविस्रवतु ॥ 15

अत्र सरस्वती-वाजिनीवतीशब्दयोः प्रतिस्वं विशेष्यपरत्वे युक्तिप्रदर्शनपुरस्सरं वाजिनीवतीशब्दस्य विशेष्यपरत्वे मन्त्रार्थो व्याख्यायताम् ।

## SECOND HALF

Examiner—PANDIT GOPINATH KABIRAJ

Full marks—50

Answer the FIRST and ANY TWO of the rest

1. विरुद्धमतनिरसनपुरःसरं मन्त्राणां विवक्षितार्थत्वसाधनानि लिङ्गान्यु- 20  
दाहियन्ताम् ।

अथवा

स्वाध्यायस्यादृष्टार्थत्वसाधकयुक्तीरपाकृत्य दृष्टफलकत्वं साध्यताम् । 20

2. को नाम वेदाख्यः पदार्थः ? तस्य किं लक्षणम् ? किं च तस्य 15  
प्रमाणम् ?

3. धर्मब्रह्मणोर्वेदविषयत्वं कथम् ? 15

4. प्रसङ्गसङ्गतिप्रदर्शनपूर्वकं स्फुटं व्याख्यायेताम् :— 15

(क) शास्त्रदृष्टविरोधाच्च ।

(ख) उक्तं च शब्दपूर्वत्वम् ।

## SECOND PAPER

The figures in the margin indicate full marks

## FIRST HALF

Examiner—DR. PRABHATCHANDRA CHAKRABARTI, M.A., PH.D.

Answer the FIRST question and ANY TWO of the rest

1. Explain the rule पूर्वसासिद्धम् । What is the use of taking it as an 20  
adhikāra sūtra? How do you interpret the terms *siddha* and *asiddha* from  
the grammatical point of view?

Or,

Fully explain कार्यकालपक्षः and यथोद्देशपक्षः with reference to the  
*Paribhāṣās* they represent. Do you notice any grammatical difference  
between these two methods of interpretation?

2. Comment on any two of the following :— 15

(a) अलाक्षणिकमपि किञ्चित्कार्यं निपातनाल्लभ्यते ।

(b) गुणोक्तं किम् ? आद्यः ।

(c) लक्षणप्रतिपदोक्तयोः प्रतिपदोक्तस्यैव ग्रहणम् ।

3. (a) Explain any two of the following :—

10 + 5

येन विधिस्तदन्तस्य । तदशिष्यं संज्ञाप्रमाणत्वात् । स नपुंसकम् ।  
तस्य भावस्त्वतलौ । कृदतिङ् ।

(b) Elucidate :—

अतिङ्ग्रहणं ज्ञापयति—‘सुपेत्येतन्नेहानुवर्त्तते’ इति ।

4. (a) Name and expound any five of the following *samāsas* :—

7½ + 7½

स्त्रीप्रमाणः । बहुदण्डिका ( नगरी ) । आत्मनेपदम् । सजातीयम् ।  
कदम्बम् । युवजरती । लोहितगङ्गम् ।

(b) Give the meaning as well as *prakṛti* and *pratyaya* of any five of the following :—

वाग्मी । पञ्चकृत्वः ( भुङ्क्ते ) । गरिष्ठः । तदानीम् । वाचाळः ।  
उदन्वान् । प्रालेयम् । सभ्यः ।

5. (a) Explain and illustrate ‘निमित्तात् कर्मयोगे’ । What peculiar meanings has Bhaṭṭoji assigned to the terms निमित्त and योग ?

(b) Show why *apādāna* is not available in अरण्ये बिभेति ।

(c) Does the expression रजकाय वस्त्रं ददाति afford an instance of *dāna* in its grammatical sense? Give reasons for your answers.

## SECOND HALF

Examiner—PANDIT SAKALNARAYAN SARMA

1. निम्नलिखित-पदिकानां काचिदेका व्याख्याया :—

10

(a) सार्वधातुके किं चिकीर्ष्यात् ।

(b) वर्गप्रत्याहारजकारग्रहो लिङ्गं णिच्च आदेशो न स्याद्वित्वे  
कार्ये ।

(c) छिन्नोक्तेर्ज्ञायते क्वचिदनुबन्धकार्येऽप्यनल्विधाविति प्रतिषेध  
इति ।

2. (a) संहितैकपदे नित्या नित्या धातूपसर्गयोः ।

10

नित्या समासे वाक्ये तु सा विवक्षामपेक्षते ॥

(b) अजन्तोऽकारवान् वा यस्तास्यनिट् थलि वेडयम् । ऋदन्त ईडङ्  
नित्यानिट् क्राद्यन्यो लिटि सेड् भवेत् ।

अत्र काचिदेका कारिका बेशयेन व्याख्यायताम् ।

3. धर्मो विजयति । शत्रुनारी स्वशिर आहन्ति । गुरुस्वर्षं बोधयते । 10  
युधिष्ठिरो राजसूयं स हयाज । त्वं पुरा भौक्ष्यसे । त्वया स्वातन्त्र्यानि ।

त्वया भोज्यं धनमिदम् । त्वया त्याग्यं पापम् ।—अत्र केषाञ्चित् पञ्चानां  
वाक्यानां संशोधनं सप्रमाणं कर्तव्यम् ।

4. कर्मवत् कर्मणा तुल्यक्रियः । सन्वह्ययुनि चङ्परेऽनग्लोपे । क्रमः 10  
परस्मैपदेषु । सेह्यपिच्च । ध्वसोरेद्वावभ्यासलोपश्च । हेतुमति च ।  
भावकर्मणोः । हन्तेजः ।

केषाञ्चित्तुर्णां सूत्राणामर्थाः सोदाहरणा लेख्याः ।

5. अचीकमत्, अगोपायीत्, अघसत्, अजागरीत्, अवधीत्, एहि, 10  
जहोहि, एधि—एषु केषाञ्चित्तुर्णां प्रयोगाणां संक्षेपेण साधुत्वं विधेयम् ।

### THIRD PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Examiner*—DR. I. J. S. TARAPOREWALA, B A., PH.D.

*Answer Question 1 and ANY THREE of the remainder*

1. Write a note on the verbal system in Vedic Sanskrit, contrasting it 21  
with that in the classical period.

2. What is the position of the following people with reference to 15  
Sanskrit studies?—

Sir Rāmakṛishna Bhandarkar, Śaṅkarācandra Vidyāsāgara and  
P. D. Gune.

3. What is the importance of 'vowel-gradation' in a language? In 15  
what form is it found in Sanskrit? Give details with illustrative examples.

4. Write notes on the following :— 15

The इ in सेट्-roots, the augment अ in several *lakāras*, and the  
*vikarāṇas*.

Point out their philological significance.

5. Write a note on the uses of the three moods—imperative, optative, 15  
and subjunctive, in Sanskrit.

6. Write a note on the uses of the instrumental or the ablative. 15

#### SECOND HALF

*Examiner*—MM. GURUCHARAN TARKA-DARSANTIRTHA

*Full marks*—31

अधस्तन-प्रभेषु द्वयोर्हतरं कार्यम् ।

1. कया रीत्या केन शाब्दबोधस्यानुमानेऽन्तर्भावः समर्थितः ? 17  
तत्त्वगूढे च जगदीशस्य कीदृशी युक्तिः ?

2. किं वाक्यलक्षणम् ? वाक्यस्वरूपे नैयायिकवैयाकरणयोः कश्चिन्मत- 17  
भेदोऽस्ति चेत् स कीदृशः ?
3. समासशक्तिवादः केषां सम्मतः ? तत्र नैयायिकानां सम्मता- 17  
वसम्मतो वा का युक्तिः ?
4. कोषोपमानवाक्यगोषाणां शक्तिग्राहकत्वे एकैकमुदाहरणं प्रदर्शय । 17

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FOURTH PAPER

*The figures in the margin indicate full marks*

FIRST HALF

*Examiner*—MM. PROF. BHAGABATKUMAR SASTRI, M.A., PH.D.

*Full Marks*—50

Write an essay on any one of the following subjects :—

50

- (1) Essence of the Vedic hymns.
- (2) The Highest Truth and the Upaniṣads.
- (3) Karman jñāna and bhakti.
- (4) Hindu theism and atheism.
- (5) Sanskrit poetry and its beauties.
- (6) The Nāṭyaśāstra of the Hindus.
- (7) Historical literature of the Hindus.
- (8) Sanskrit and Prākṛta languages.
- (9) Law literature of the Hindus.
- (10) Methods of Hindu polity.

SECOND HALF

*Examiner*—DR. SURENDRANATH DASGUPTA, M.A., PH.D.

Write an essay on any one of the following subjects :—

50

- (a) Discuss the development of Sanskrit drama, with a special reference of the growth of the conception of 'character'.

Or,

Trace the development of Sanskrit Lyric poetry, with special reference to the reflection of subjectivity through nature in any of its special features.

- (b) Discuss the stages of the growth of the Upaniṣadic thought from the Vedas, giving the history of conflict of ideals and reconciliation in the transition stages.

Or,

Discuss the philosophical and eschatological conceptions of the Vedic people.

(c) What is the utility of the study of *Mīmāṃsā* for an orthodox Vedic Brahmin and for a heterodox scholar?

Or,

Conception of *vidhi* and *arthavāda* according to Kumārila and Prabhākara, with concrete sacrificial examples to elucidate the views.

(d) Trace the development of Vedantic ideas from Gauḍapāda to Prakāśānanda, with special reference to the important contributions of the prominent teachers.

Or,

Discuss how far the Upaniṣadic ideas influenced Buddhism and how far Buddhism influenced the Vedānta of Gauḍapāda and Śaṅkara.

(e) Discuss fully the points of agreement and difference between Sāṃkhya and Yoga in all their important bearing, and express your views as to whether the differences are such as to justify us to call Yoga a separate system of thought.

Or,

Discuss clearly the theory of Yoga Psychology explaining the theories of *saṁskāra*, *vāsanā*, and *vr̥tti*, with special reference to the modes of its application for the attainment of the highest goal through moral elevation.

(f) What are the special features of Nyāya-Vaiśeṣika realism in metaphysics, psychology, and epistemology?

Or,

Discuss the growth of the Nyāya concept of causality, its important criticisms by the thinkers of other schools, and their replies by Nyāya.

(g) Discuss the conditions, means, and nature of salvation in Nyāya, Vedānta, and Yoga.

Or,

Compare the epistemological situation in Nyāya, Sāṃkhya, Vedānta, and Buddhism, noting their mutual relations and chief points of difference.

(h) Trace the growth and development of the Prākṛit poetry, with special reference to the treatment of the sentiment of love.

Or,

Discuss the relation of Prākṛit with Sanskrit in origin, growth, and mutual influence.

(i) Describe the character of Aśoka as a man and king from the inscriptional and other literary documents.

Or,

Describe the social, political, and economic conditions of India from the 3rd to the 7th century A. D. from the inscriptional sources.

## GROUP A

## FIFTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

Examiner—PANDIT KUNJABIHARI TARKATIRTHA

( संस्कृतभाषया प्रश्नाः समुत्तार्याः ) ।

1. निम्नलिखित-श्लोकेषु प्रथम-द्वितीय-तृतीय-चतुर्थानां मध्ये द्वयोः, 26  
अथवा पञ्चम-षष्ठ-सप्तमानां मध्ये द्वयोः वक्तृबोद्धव्यप्रकरणनिर्देशपूर्वकं  
टीकांरीत्या व्याख्यानं कार्यम् :—

- (१) प्राशुराशु हवनीयमल य-  
त्तेन दीर्घममरत्वमध्यगुः ।  
उद्धतानधिकमेधितौजसो  
दानवांश्च विबुधा विजिग्यरे ॥
- (२) जगति श्रिया विरहितोपि  
यद्बुद्धिसुतामुपायथाः ।  
ज्ञातिजनजनित-नामपदां  
त्वमतः श्रियःपतिरिति प्रथामगाः ॥
- (३) स्वकेलिलेशस्मितनिन्दितेन्दुनो  
निजांशदृक्-तज्जितपद्मसम्पदः ।  
अतद्बुद्धीजित्वरसुन्दरान्तरे  
न तन्मुखस्य प्रतिमा चराचरे ॥
- (४) कृणानीव घृणावादान् विधूनय बधूरनु ।  
तवापि तादृशस्यैव का चिरं जनवञ्चना ॥
- (५) शासनेऽपि गुरुणि व्यवस्थितं  
कृत्स्नवस्तुषु नियुक्त्वा कामतः ।  
त्वं प्रयोजनघनं धनञ्जया-  
वन्य एष इति माञ्च मावगाः ॥



(६) न च तं तदेतिशयमान-  
मपि यदुनृपाः प्रचुक्रुधुः ।  
शौरिसमरनिगृहीतधियः  
प्रभुचित्तमेव हि जनोऽनुवर्त्तते ॥

(७) विनिद्रपलालिगतालिकैतवा-  
न्मृगाङ्गचूडामणिवर्जनाजितम् ।  
दधानमाशासु चरिष्णु दुर्यशः  
स कौतुको तल ददर्श केतकम् ॥

(८) क्रमाद्द्वीयसा तेषां तदानीं समदृश्यत ।  
स्पष्टमष्टगुणैश्चर्यात् पर्यवस्यन्निवाणिमा ॥

2. निम्नलिखित-श्लोकयोस्तात्पर्यं स्वकीयसंस्कृतभाषया संक्षेपेण 10  
लिख्यताम् :—

(१) केवलं दधति कर्त्तृवाचिनः  
प्रत्ययानिह न जातु कर्मणि ।  
धातवः सृजतिमंहशान्तयः  
स्तौतिरत्र विपरीतकारकः ॥

(२) अमुष्य विद्यारसनाग्रनर्त्तकी  
सयीव नीताङ्गुणेन विस्तरम् ।  
अगहताष्टादशतां जिगीषया  
नवद्वयद्वीप पृथग्जयश्रियाम् ॥

3. निम्नलिखितपदेषु यस्य कस्यचित्त्वयस्य व्याकरणप्रक्रिया प्रदर्श्य- 6  
ताम् :—

स्थलायताम्, न्यवर्त्ति, नयतीर्णद्व्यपथे, उपेयुषा, विभ्रतम्, गच्छतः  
स ।

4. “उपमा कालिदासस्य भारवेरथगौरवम् । 8  
नैषधे पदलालित्यं माघे सन्ति तयो गुणाः ॥”

इति सुप्रसिद्धश्लोकस्य शेषार्द्धप्रतिपाद्यं श्रीमते रोचते न वा ? रोचते चेत्  
कथम् ? न रोचते चेत् कथम् ? न रोचते चेत् किन्तदरुचिकारणम् ?

## SECOND HALF

Examiner—MM. PROF. BHAGABATKUMAR SASTRI, M.A., PH.D.

(Full marks—50)

1. Answer any five of the following :—

5 × 5 = 25

(a) Write notes on :—

ब्राह्मम्, वैशाखाक्षम्, बाहुदन्तकम्, बाहस्पत्यम् and औशनसम्  
(अर्थशास्त्रम्) ।

(b) Explain :—

“अग्रे सर्वेषु यज्ञेषु श्रद्धायज्ञो विधीयते ।”

(c) “कथं चारं प्रयुज्जीत ?”

(d) सप्राङ्निवाकः सामात्यः सप्राङ्गणपुरोहितः ।

समाहितमतिः पश्येद्वयवहाराननुक्रमात् ॥

—Fully explain.

(e) What is to be regarded as a defective document in evidence?

(f) “यानं पञ्चविधं स्मृतम्”—Explain.

(g) वृत्ते पक्षपातेन मिलं यदुभयात्मकम् ।

वज्रीव हि क्षिशिरसं तदुच्छिन्ध्यात् कृतत्वरः ॥

—Set forth the illusion and explain the verse.

(h) Explain and illustrate प्रतीकारसन्धि and संयोगसन्धि ।

(i) What is वैतसी वृत्ति and what is भौजङ्गी वृत्ति ?

(j) How मन्त्रभेद is to be avoided?

2. Translate into Sanskrit :—

25

Prince, are you afraid of an after-life? Is there life after death? Can you conceive of life without the body? Does not the body perish completely after death when consigned to the flames? What does remain of it? Nothing. Then, wherein life is to persist? Apparently nowhere. It is sheer humbugism to speak of an immortal soul. Such a theory has been built up by the priests to serve their sordid ends. Departed fathers to partake of offerings here? How beautiful! Why do they not offer food and drink to their dear ones absent in a distant land? If the dead ones can receive food and drink offered them here, why not the absentee relatives and friends? The whole thing is a fraud—to deceive the unwary. Surely one of your intelligence cannot be imposed upon in this way. Give up then all fears of a future life, of punishment after death. All punishments, all rewards are here, and not hereafter. Man reaps as he sows, in this life and this life only. No mistake about that.

## SIXTH PAPER

The figures in the margin indicate full marks

## FIRST HALF

Examiner—PANDIT UPENDRANATH VIDYABHUSHAN

1. Answer one of the following :—

12

(a) Compare Bhavabhūti and Bhaṭṭanārāyaṇa as dramatists.

(b) Compare कालिदास and भवभूति both as poets and dramatists.

(c) To what types of dramatic works ( रूपक OR उपरूपक ) do विक्रमोर्वशीय and मृच्छकटिक belong? Why? Justify or impugn the correctness of their nomenclature. To whom between the two dramatists do you give the higher place as a playwright? Why?

2. Select three ślokas from the following groups but not more than one from one group, and explain them in Ṭika form, discussing grammar and rhetoric as necessary :—

24

## GROUP A

(a) परस्परविरोधिन्योरेकसंश्रयदुर्लभम् ।

सङ्गतं श्रीसरस्वत्योर्भूयादुद्भूतये सताम् ॥

(b) वेदान्तेषु यमादुरेकपुरुषं व्याप्य स्थितं रोदसी

यस्मिन्नीश्वर इत्यनन्यविषयः शब्दो यथार्थाक्षरः ।

अन्तर्यंश्च मुमुक्षुभिर्नियमितप्राणादिभिर्मृग्यते

स स्थाणुः स्थिरभक्तियोगसुलभो निःश्रेयसायास्तु वः ॥

## GROUP B

(c) सुखं हि दुःखान्यनुभूय शोभते

घनान्धकारेणैव दीपदर्शनम् ।

सुखात्तु यो याति नरो दरिद्रतां

धृतः शरीरेण मृतः स जीवति ॥

(d) प्रभवति यदि धर्मो दूषितस्यापि मेऽद्य

प्रबलपुरुषवाक्यैर्भाग्यदोषात् कथञ्चित् ।

सुरपतिभवनस्था यत्न तत्र स्थिता वा

व्यपनयतु कलङ्गं स्वस्वभावेन सैव ॥

## GROUP C

(e) धिक् सानुजं कुरुपतिं धिगजातशत्रुं

धिग् भूपतीन् विफलशस्त्रभृतो धिगसान् ।

केशप्रहः खलु तदा द्रुपदात्मजाया

द्रोणस्य चाद्य लिखितैरिव वीक्षितोल्यैः ॥

- (f) तां वत्सलामभिनन्द्य विनीतमम्बां  
गाढञ्च मामनुगुह्य मयाप्यनुक्तः ।  
एतां स्वयंवरबधू-सदृशीमपृष्टा  
दीर्घप्रवासमपि वत्स ! कथं गतोऽसि ॥

## GROUP D

- (g) पतिव्रतामयं ज्योतिर्ज्योतिषान्येन शोध्यते ।  
इदमाश्चर्यमथवा लोकस्थित्यनुवर्त्तनम् ॥
- (h) प्राचेतसो मुनिवृषा प्रथमः कवीनां  
यत् पावनं रघुपतेः प्रणिनाय वृत्तम् ।  
भक्तस्य तत्र समरंसत मेऽपि वाच-  
स्ताः सुप्रसन्नमनसः कृतिनो भजन्ताम् ॥

3. (a) Explain fully the formation of any three of the following :— 6

मैत्रावरुणिः, प्रपौत्तः, गन्तुकामः, परमेष्ठो, दिवौकसः, मनीषी and  
जनकानाम् ।

Or,

- (b) Point out two instances from the महावीरचरित where the poet has  
departed from the Rāmāyaṇa, and show how they have been necessary for  
dramatic purposes. 8

Or,

- (c) What is नान्दी in a Sanskrit drama? Which of the five Sanskrit  
plays you have studied for the M.A. Examination may be said to begin  
with the नान्दी? Justify or impugn the expression 'नान्यन्ते सूतधारः'  
used either in the very beginning or the end of the beginning stanza or  
stanzas of a drama.

## SECOND HALF

Examiner—MR. DEBENDRANATH RAY, M.A.

1. What evidence can you adduce from the Mālatī-Mādhava to prove  
that Bhavabhūti knew of Kālidāsa and Subandhu? 7

Or,

What part does Kāmandaki play in the drama?

2. (a) Render into Sanskrit :— 6

अहो दाणिं वि हिअभस्स मे अणासङ्को जेण एवं वि आसासणं  
विप्पलम्भोत्ति संभावेमि । कथं अल्लराहं वि । महाभाअ सरिसं खु दे  
णिम्माणस्स वअणं महुरदाए । दंसणं उण तक्कालमणोहरं परिणामदीह-  
संदावदारुणं । धण्णाओ खु ताओ अम्मकाओ जाओ तुमं ण पेक्खन्दि,  
पेक्खअ वा अत्तणो हिअभस्स पहवन्दि ।

(b) Explain in Sanskrit one of the following stanzas, using the context :— 5

- (i) व्यतिषजति पदार्थानान्तरः कोऽपि हेतु-  
न खलु बहिरूपाधीन् प्रीतयः संश्रयन्ते ।  
विकसति हि पतङ्गस्योदये पुण्डरीकं  
द्रवति च हिमरश्मावुद्गते चन्द्रकान्तः ॥

- (ii) सुहृदिव प्रकटय्य सुखप्रदः  
प्रथममेकरसामनुकूलताम् ।  
पुनरकाण्डविवर्त्तनदारुणः  
प्रविशिनष्टि विधिर्मनसो रुजम् ॥

(c) Point out the figure of speech contained in the stanza selected by you. 3

(d) Write short notes on two of the following :— 4

प्रकरणम्, निसृष्टार्थदूती, पञ्चामृतकर्षणम्, महामांसम्, श्रीपर्वतः,  
पद्मावती, वासवदत्ता and कापालिकव्रतम् ।

3. Translate into Sanskrit :—

25

The father now desired greatly to see the son about whom he had heard so much. He therefore disguised himself, and contrived to get near enough by night to see him sitting in his tent drinking wine with the generals—perfect in stature, majestic in mien and action. The next morning the old warrior appeared before the valliant youth and invited him to go to a little distance and fight apart from the beholders. But a feeling of affection rose in the heart of the son who refused to fight one whom he suspected to be his father. But as the old, practised hero denied his identity, they fought with spears, swords, and clubs. Their horses were almost exhausted, and blood and sweat poured on the ground. They then agreed to continue the battle on the next day. They fought from morning to darkening even tide, but doubt was still hanging on either side. At length compassion rose in the father's heart and he proposed, 'I cannot slay thee—let us part.'

## SEVENTH PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

*Examiner*—MR. HARIHAR BANERJEE, M.A.

1. Give in your own Sanskrit the plot of the story of Vāsavadattā. Is the author of the book 'Vāsavadattā' indebted to some previous author for the production of the plot? 15

Compare Subandhu and Bāṇa as writers of poetic prose.

2. Discuss the figures of speech in any three of the following :— 12

- (a) अतिमलिने कर्त्तव्ये भवति खलानामतीव निपुणा धीः ।  
तिमिरे हि कौशिकानां रूपं प्रतिपद्यते चक्षुः ॥

(b) यस्य च समरभुवि भुजदण्डेन कोदण्डं कोदण्डेन शराः शरै-  
ररिशिरस्तेनापि भूमण्डलं तेन चाननुभूतपूर्वं नायको नायकेन कीर्त्तिः कीर्त्या  
च सप्तसागराः सागरैः कृतयुगादिराजचरितस्सरणमनेन च स्थैर्यममुना च  
प्रतिक्षणमाश्चर्यमासादितम् ।

(c) महावराहो गोत्रोद्धरणप्रवृत्तोऽपि गोक्षोहलनमकरोत् । राघवः  
परिहरन्नपि जनकभुवं जनकभुवा सह वनं विवेश ।

(d) यो बलभित् पावको धर्मवाणनिर्ऋतिः प्रचेताः सदागतिर्धनदः  
शङ्कर इत्यष्टमूर्त्तिरप्यनष्टमूर्त्तिः पार्थ इव सुभद्रोपेतः समीमसेनश्च कृष्ण इव  
सत्यभामोपेतः सबलश्च ।

3. Translate into English either (a) or (b), referring to the double meaning, if any :— 8

(a) अस्ति सुधाधवलैर्बृहत्कथारम्भैरिव शालभञ्जिकोपेतैर्वृत्तैरिव  
समाणवकक्रीडितैः करियुथैरिव समत्तवारणैः सुग्रीवसैन्यैरिव सगवाक्षैर्बलि-  
भवनैरिव सुतलसन्निवेशैर्वैदमभिरुपशोभितं कुसुमपुरं नाम नगरम् ।

(b) यत्न च सुरासुरमौलिमालालालितचरणारविन्दा शुम्भनिशुम्भ-  
महावनदावज्वालामहिषमहासुरगिरिवज्रसारधाराप्रणयप्रगतगङ्गाधरजटाजूट-  
स्खलितजाह्नवीजलधाराधौतपादपद्मा भगवती कात्यायनी वेतालाभिधाना  
स्वयं प्रतिवसति ।

4 Explain in Sanskrit either (a) or (b) :—

15

(a) अथ वासरताम्रचूडचूडाचक्राकार-चक्रवाकचक्रसंक्रमितसन्ताप-  
तयेव मन्दिमानमुद्रहन् मन्दारस्तवकसुन्दरः सिन्दूराहतसुरराजकुम्भिकुम्भ-  
विभ्रमं बिभ्रानस्ताण्डवचण्डवेगोच्छलितधूर्जटिजटाजूटकूटवन्धवन्धूरविकट-  
वासुकिभोगमणि-ताटङ्कसनाभिमण्डलः मन्ध्यासन्धिनी सरसयावकपटलचारु-  
वार्हणीवारविषासिन्यरुणमणिकुण्डलकान्तिः कालकरवालकृत्तवासरमहिष-  
स्कन्धचक्राकारो मधुपूर्णं कपालपालमिव कालकपालिनोऽम्लानकुसुमस्तवक  
इव नभःश्रियो गगनाशोकतरुस्तवक इव कनकमयदर्पण इव प्रतीचीविलासिन्या  
भगवान् दिनमणिश्रृण्वपयसि तरलतरङ्गवेगोच्छलितविद्रुमवितपाकृतिर्ममज ।

(b) यस्य च रिपुवर्गः सदा पार्थोऽपि न महाभारततरणयोग्यः ।  
भीष्मोप्यशान्तनवेहितः, सानुचरोऽपि न गोक्षभूषितः । अपि च त्रिशङ्कुरिव  
न क्षत्रपथस्खलितः, शङ्करोऽपि न बिषादी, पावकोऽपि न कृष्णवर्त्मा,  
श्रयाशोऽपि न दहनः, नान्तक इवाकस्मादपहृतजीवनः, न राडुरिव मित्त-  
मण्डलग्रहणविवर्धितरुचिः, न नल इव कलिविघटितो, न चक्रीव शृगाल-  
बधस्तुतिसमुल्लसितो, न गोप इव यशोदयाश्रितो, जरासन्ध इव घटितसन्धि-  
विग्रहो, भागव इव सदानभोगो, दशरथ इव सुमिक्षोपेतः सुमन्त्राधिष्ठितश्च,  
दिक्षीप इव सुदक्षिणानुरक्तो रक्षितव्यश्च, राम इव जनितकुशलवयोरुपोच्छायः ।

## SECOND HALF

Examiner—MM. PROF. BHAGABATKUMAR SASTRI, M.A., PH.D.

1. To which class of गद्यकाव्य does हर्षचरित belong? What account of the author and his family is given in the earlier chapters of the work? 12

Or,

What history of Harṣavardhana and his family can be obtained from the Harṣacharita?

2. Annotate in Sanskrit either (a) or (b) :—

8

(a) अकाण्डप्रयाणसंज्ञाशङ्कभुमितं तु संभ्रमात् सजीभूतमुन्मूत-  
मुखरखुरवभरितसकलभुवनविवरमागत्यागत्य सर्वाभ्यो दिग्भ्यो धावमान-  
मश्वीयमदौकत । प्रस्थितस्य चास्य प्रदक्षिणेतरं प्रयान्तो विनाशमुपस्थितं  
राजसिंहस्य हरिणाः प्रकटयाम्बभूवुः । अशिशिररश्मिमण्डलाभिमुखश्च  
हृदयमवदारयन्निव दावशुष्के दारुणि दारुणं रराण वायसः । कज्जलमय  
इव बहुदिवसमुपचितवहलमलपटलमकिनिततनुरभिमुखमाजगाम शिखि-  
पिच्छलाञ्छनो नगनाटकः ।

(b) देव, न क्वचित् कृताश्रयया मलिनया मलिनतराः कोकिलया  
काका इव कापुरुषा हतलक्ष्मया विप्रलभ्यमानमात्मानं चेतयन्ते । श्रियो  
हि दोषान्धतादयः कामला विकाराः । छत्रच्छायान्तरितरवयो विस्मरन्त्यन्यं  
तेजस्विनं जडुधियः । किं वा करोतु वराकः येनातिभीरुतया नित्यपराङ्मुखेन  
न तु दृष्टान्येव सर्वातिशायिशौर्योतिशयश्वयथकपिलकपोलपुलकपल्लवित-  
कोपानलानि कुपितानां तेजस्विनां मुखानि । नासौ तपस्वी जानात्येवं  
यथाभिचारा इव विप्रकृताः सद्यः सकलकुलप्रलयमुपहरन्ति मनस्विनः ।

3. Clearly bring out the implication in :—

5

विहग कुरु इदं मनः स्वयं त्यज शुच मास्व विवेकवर्त्मनि ।  
सह कमल सरोजिनीश्रिया श्रयति सुमेरुशिरो विरोचनः ॥

Or,

विस्त्रब्धघातदोषः स्ववधाय खलस्य वीरकोपकरः ।  
नवतरुभङ्गध्वनिरिव हरिनिद्रातस्करः करिणः ॥

4. Translate into English :—

25

श्लेषप्रायमुदीच्येषु प्रतीच्येष्वर्यमात्रकम् ।  
उल्लेक्षा दाक्षिणात्येषु गौडेष्वक्षरदम्बरः ॥  
नबोऽर्थो जातिरग्राम्या श्लेषोऽक्लिष्टः स्फुटो रसः ।  
विकटाक्षरबन्धश्च कृत्स्नमेकत्र दुष्करम् ॥  
किं कवेस्त्व काव्येन सर्ववृत्तान्तगामिनी ।  
काव्येव भारती यस्य न व्याप्नोति जगत्त्रयम् ॥

उच्छासान्तेऽप्यखिन्नास्ते येषां वक्त्रे सरस्वती ।  
 कथमाख्यायिकाकारा न मे वन्द्याः कवीश्वराः ॥  
 कवीनामगलहर्षो नूनं वासवदत्तया ।  
 शक्तेः पाण्डुपुत्राणां गतया कर्णगोचरम् ॥  
 पदबन्धोज्ज्वलो हारी कृतवर्णक्रमस्थितिः ।  
 भट्टारहरिचन्द्रस्य गद्यबन्धो नृपायते ॥  
 अविनाशिनमग्राम्यमकरोत् सातवाहनः ।  
 विशुद्धजातिभिः कोशं रत्नैरिव सुभाषितैः ॥  
 कीर्त्तिः प्रवरसेनस्य प्रयाता कुमुदोज्ज्वला ।  
 सागरस्य परं पारं कपिलेनेव सेतुना ॥

## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner—MR. SATKARI MUKHERJEE, M.A.*

*Answer the SIXTH and ANY TWO of the rest*

1. What is the attitude of Mammaṭa Bhaṭṭa towards *rasa*? Does he accord a place of supreme importance to it? If so, why has he not incorporated it in his definition of poetry (*kāvya*)? Show in this connexion the relevancy of Viśvanātha's criticism of Mammaṭa's definition of poetry and how far this criticism is fair and legitimate. 20

2. Discuss the definition of *lakṣaṇā* as propounded by Mammaṭa and the *raison d'être* of its division into *sāropā* and *sādhyavasānā*. Is the distinction between the two only a question of verbal or syntactical value or is it based on a material difference of sense also? Again, how can *upādāna lakṣaṇā* be subsumed under *lakṣaṇā* when there is no surrendering or inappropriateness of the primary meaning? 20

3. What is the logical necessity of postulating the separate existence of *vyāñjanā*? What do you think of the attempts made to include it under *lakṣaṇā* in the case of लक्षणासूत्रध्वनि? What is the harm if in the proposition 'गङ्गायां घोषः', the word गङ्गा is believed to denote by *lakṣaṇā* 'शैत्यपावनरवविशिष्टरी' and so resort to *vyāñjanā* be made nugatory? 20

4. Write a short thesis on verbal suggestion (*śabdaśaktimūladhvani*). Can it be subsumed under *abhidhā*? How do you distinguish it from समालोकि, लिष्टविशेष्याप्रस्तुतप्रशंसा and श्लेष? If अलङ्कारध्वनि in this case is resorted to in order to avoid syntactical duplication (वाक्यभेद), how can there be a वस्तुध्वनि in this case without giving rise to this contingency? 20



5. (a) What is the criterion of distinction between पददोष and 20  
अर्थदोष and वाक्यदोष ? Are all *padadosas* capable of being extended  
to the category of *rākyadoṣa* ? If not, what *padadosas* are excluded and  
why ?

(b) Distinguish between निदर्शना and दृष्टान्त, रूपकध्वनि and  
समासोक्ति, परम्परित and सावयवरूपक. Discuss in this connexion  
the soundness or otherwise of the principle of distinction into verbal (शाब्द  
and material (आर्थ) of *doṣa*, *guṇa* and *alaṅkāra* as a question of आश्रया-  
श्रयिभाव or अन्वयव्यतिरेक.

6. Write a short note on the principles of classification of metres that 10  
have been followed in the *Chandomañjorī* and referred to the part played by  
यति, वृत्त and मात्रा.

## SECOND HALF

Examiner—MR. SIBAPRASAD BHATTACHARYYA, M.A.

1. What do you gather about Bhoja's conception of the entities *guṇa*  
and *doṣa* from the *Sarvasaṅkṣāṇṭhābhāṣa* ? Are these two in his opinion  
interrelated ? Give reasons for your answer. In what essential respect do  
his views differ from those of later masters (e.g., Mammata and Viśvanātha)  
on the subject ?

2. Cite Viśvanātha's definitions of *kāvya* and *dhvani-kāvya* and bring  
out the consequent inconsistency in this position. Can you explain away  
this inconsistency ? How does Viśvanātha account for his non-inclusion of  
*citra* as a class of *kāvyas* ?

Or,

Explain and illustrate the salient features of, and indicate the most  
important subdivisions of, any two of the following figures of poetry either  
in the manner of Bhoja or in that of Viśvanātha :—

अनुप्रास, निदर्शना, विरोध, दीपक, समासोक्ति ।

3. Discuss and elucidate any two of the following statements :—

(i) एवमवस्थापिते गुणरसानामलङ्कारत्वे षट्प्रकारोऽलङ्कारसङ्ग्रहः  
सम्भवति ।

(ii) प्रसिद्धेरनुरोधेन यः परस्परमर्थयोः ।

भूयोऽवयवसामान्ययोगः सेहोपमा मता ॥

(iii) गुणाः शौर्यादिवत्, अलङ्काराः कटककुण्डलादिवत्, रीतयो-  
ऽवयवसंस्थानविशेषवत् ।

(iv) स्वरस्तु वेद एव विशेषप्रतीतिकृन्न काव्य इति तस्य विषये  
नोदाहृतम् ।

(v) ननु समूहालम्बनात्मकपूर्णघनानन्दस्वरूपस्य रसस्य तादृशेन-  
तररसेन कथं विरोधः सम्भावनीयः ? ... सत्यमुक्तम् । अतएवात्र  
प्रधानेतरेषु रसेषु स्वातन्त्र्यविश्रामराहित्यात् पूर्णरसभावमात्माच्च विलक्षणतया  
सञ्चारिरसनाम्ना व्यपदेशः प्राच्यानाम् ।

Or.

Comment on the outstanding peculiarity from the standpoint of  
poetics in the verses in Group A of the next question, mentioning the  
*alāṅkāra* in each case.

4. Translate into English either of the following groups of verses :— 25

#### GROUP A

पुरा सरसि मानसे विकचसारसास्त्रिखलत्-  
परागसुरभीकृते पयसि यस्य यातं वयः ।  
स पल्लवजलेऽधुना मिलदनेकभेकाकुले  
मरालकुलनायकः कथय रे कथं वर्त्तताम् ॥

सौरभ्यं भुवनस्येऽपि विदितं श्रैत्यञ्च लोकोत्तरं  
कीर्त्तिः किञ्च दिगङ्गनाङ्गनगता किं त्वेतदेकं शृणु ।  
सर्वानेव गुणानियं निगिरति श्रीखण्ड ते सुन्दरा-  
नुज्झन्ती खलु कोटरेषु गरलज्वालां द्विजिह्वावली ॥

समुत्पत्तिः स्वच्छे सरसि हरिहस्ते निवसनं  
निवासः पद्मायाः सुरहृदयहारी परिमलः ।  
गुणैरैतैरन्यैरपि च ललितस्याम्बुज तव  
द्विजोत्तसे हंसे यदि रतिरतीवोन्नतिरियम् ॥

#### GROUP B

वृन्दारकाधिपशिरोरुहपारिजात-  
स्त्रगवन्धुभिर्मधुकरैरुपवीणिताङ्गिः ।  
देवः स्वयं जगदनुग्रहसारकार-  
स्तं बालशीतकिरणाभरणोऽधिहोते ॥

लोलाञ्जलानिलविनिर्झृतसिद्धसिन्धु-  
नीरन्ध्रसीकरकरालतया चकासि ।  
सायाङ्कताण्डवविधौ गजराजकृत्ति-  
र्यस्याधुनाप्यजहतीव कवाटमुक्ताः ॥

अष्टौ तनूरपि दिदृक्षुरिवैककालं  
 नोत्वा दृशो नवविकासविलासमष्टौ ।  
 देवः कुशेशयकुटीचरतापसोऽपि  
 यस्याग्रतोऽनुदिवसं विनयं प्रयुङ्क्ते ॥  
 कुम्भः करे शिरसि वारिगतिः श्रयन्ति  
 मुक्ताः षट् चरणयोश्च गजा कलसम् ।  
 नागैर्मन्दोत्त्वगमुखैर्वृत्तमङ्गमङ्गं  
 यस्याद्भुतस्थितिमतः सुरकुञ्जरस्य ॥

## GROUP C

## FIFTH PAPER

*Examiner*—MM. ANANTAKRISHNA SASTRI

*The figures in the margin indicate full marks*

## FIRST HALF

*Full marks—75*

पञ्चैव प्रश्नाः समाधेयाः ।

1. वेदवाक्यानां प्रामाण्यमेवेति नियमः वेदवाक्यानामेव धर्मे प्रामाण्य- 15  
 नियमश्च कथं मीमांसकैः साध्यते ? कानि कानि अप्रामाण्यकारणानि केन  
 केन सूत्रेण कथं कथं निरस्तानि ? सर्वं निष्कृष्य प्रतिपाद्यताम् ।
2. निरर्थवाद-विधिस्थले निर्विधिकार्थवादस्थले च कथं प्रवर्तकत्वम् ? 15  
 कथं च श्रूययाणानामप्यर्थवादानां न निष्प्रयोजनत्वम् ?
3. वनवाद-रूपोपवाद-शरीरात्मवादाः कथं भाष्यकारैरुपक्षिप्य 15  
 तिरसिताः ? के वा च वृत्तिकाराः ?
4. आचाराप्रामाण्यकारणानि संवृद्धा तत्प्रामाण्यं तत्प्रामाण्यविचारस्य 15  
 वेदवाक्यमीयासायां का सङ्गतिरिति विविच्यताम् ।
5. चित्तापदम्, अग्निहोत्रपदम्, वैश्वदेवपदं च कथं नामधेयमिति 15  
 निष्कृष्यताम् ।
6. अभ्यासात् कर्मभेदोदाहरणं परीक्ष्य अभ्यासलक्षणं लक्ष्यसमन्वयपूर्वकं 15  
 द्रष्टव्ययोजननिरूपणपूर्वकं च संगृह्यताम् ।
7. श्रुति-स्मृति-वाक्योदाहरणानि संगृह्य तेषु श्रुति-स्मृति-वाक्य-लक्षण- 16  
 समन्वयः क्रियताम् ।

## SECOND HALF

Full marks—75

Translate into English :—

मीमांसा नाम वेदार्थविचारः । तस्य च प्रयोजनं यथावदेवार्थज्ञानेन कर्मानुष्ठानाद्वारा स्वर्गादिप्राप्तिरेव । वेदार्थज्ञानमवश्यं संपादनीयमिति “स्वाध्यायोऽध्येतव्य इति विधिः प्रतिपादयतीति कुमारिलपादा मन्यन्ते” पुरुषार्थानुशासनकारास्तु “ब्राह्मणेन निष्कारणेन षडङ्गो वेदोऽध्येयो ज्ञेयश्चेति स्वतन्त्रविध्यन्तरमेवोक्तमर्थं प्रतिपादयतीति मन्वते । अध्ययनं तु स्वविधिसिध्यमध्यापनविधिसिद्धं वेति भट्टप्रभाकरयोरस्ति मतभेदः । अपञ्चद्वाधिकरण-सार्थक्यं मतद्वयेऽपि भवतीति तदीया आशेरते । वेदवाक्यानि विधिमन्त्ररूपाणि । निषेधार्थवादनामधेयानां विधावन्तर्भावः । स्मृतीनामाचाराणां च परोक्षवेदद्वारा प्रामाण्यम् । व्यवहाराध्याया अपि स्मृतिगता वेदार्थमेव प्रतिपादयन्ति । अर्थशास्त्राद्धि बलवद्धर्मशास्त्रमिति स्थितिरिति प्राचीना अभिप्रयन्ति ।

## SIXTH PAPER

Examiner—MM. S. KUPPUSWAMI SASTRI

The figures in the margin indicate full marks

## FIRST HALF

Full marks 50

1. “चोदनालक्षणोऽर्थो धर्मः” “चोदना पुनरारम्भः”—अनयो- 10  
रधिकरणयोर्भाट्टगुरुमतयोर्वैलक्षण्यं विशदयत ।

2. [A or B should be answered].

A—(1) “अभिक्रामं जुहोति” इत्यस्य मतभेदेन विचारं प्रवर्त्य निर्णयं 10  
दर्शयत ।

(2) “एतस्यैव रेवतीषु वारवन्तीयमग्निष्टोमसामकृत्वा पशुकामो ह्येतेन यजेत” अस्य वाक्यस्य पूर्वपक्षे सिद्धान्ते च पदार्थयोजनपूर्वकं वाक्यार्थमुपवर्णयत ।

Or,

B—“क्रमाद्वाक्यं बलीयोऽत एषां दर्शादि-शेषता ।” केषामिति 10  
प्रदर्श्य पक्षमिममुद्गाह्य प्रतिक्षिपत ।

3. [A or B should be answered.]

A—सयुक्तिकं प्रतिपादयतः—

(1) “प्रयाजशेषेण हवींष्यभिधारयति” हविस्संस्कारकत्वमेव अभि-  
धारणस्य कुतो न ?

(2) “वाजपेयेनेष्टा बृहस्पतिसवेन यजेत” “दर्शपूर्णमासाभ्यामिष्टा सोमेन यजेत” अनयोस्तुल्यन्यायता कुतो न ?

Or,

B—स्वरूपे सोदाहरणं विवेचयत :—

10

(1) विनियोगप्रयोगविधि-सहकारिणोः स्थानयोः ।

(2) काण्डानुसमयपदार्थानुसमयोः ।

(3) तन्त्रप्रसङ्गयोः ।

4. [A or B should be answered]

A—अधोनिर्दिष्टन्याययोः आद्ययोर्वा द्वितीययोर्वा उपष्टम्भके अधिकरणे प्रदर्श्य विषयौ विवच्य व्यवस्थापयत :—

(1) पूर्वं प्रबलमिति न्यायः, परं प्रबलमिति न्यायः ।

(2) मुख्यानुसार्यमुख्यम्, अमुख्यानुसार्यं पितु भवति मुख्यम् ।

Or,

B—(1) अतिदेशं लक्षयित्वा लक्ष्ये संगमयत ।

10

(2) के अनतिदेश्याः, कुतश्च—इति प्रतिपादयत ।

5. [A or B should be answered]

A—(1) त्रिविधानामप्यहानां स्वरूपमेकैकोदाहरणेन विशदयत ।

10

(2) सप्तमाष्टमनवमदशमैकादशद्वादशानामध्यायानां पौर्वापर्यमुपपादयत ।

Or,

B—विचार्य निर्धारयत :—

10

(1) आरम्भणीयामप्यारम्भणीया भवति वा न वेति ।

अथवा,

(2) दण्डाकलितवत् सखे लग्नीकावृत्तिरिव्यते । स्वस्थान-वृद्धिरथ वा ।

SECOND HALF

Examiner—MM. PRAMATHANATH TARKABHUSHAN

1. कर्त्ता आक्षेपलभ्य आख्यातवाच्यो वेति संशये मीमांसकानां 15  
कस्तावत् सिद्धान्तः ? परपक्षीयसिद्धान्तस्थापनपरा युक्तीः खण्डयित्वा तस्य सिद्धान्तस्य स्थापनपरा युक्तयः प्रदर्शयन्ताम् ।

अथवा,

सोमेन यजेतेत्यस्य गुणविधानं विशिष्टविधानं वेति मीमांसान्यायप्रकाश-दर्शितदिशा विचार्य निर्णयिताम् ।

2. लक्ष्मणोदाहरणोपन्याससहितं स्थानक्रमस्य स्वरूपं न्यायप्रकाश- 10  
मनुसूत्य प्रदर्शयताम् ।

अथवा,

“तद्धितेन चतुर्थ्या वा मन्त्रवर्णेन वा पुनः ।  
देवताया विधिस्तत्र दुर्बलं तु परं परम् ॥” इति

अयं श्लोकः सोदाहरणोपन्यासं व्याख्यायताम् ।

3. Translate any one of the following extracts :—

25

(A) “कः पुनरेषां भेदः ? अत्यन्ताप्राप्तप्रापणं विधिः, यथाग्नि-  
होत्रं जुहुयादष्टकाः कर्त्तव्या इति । पक्षे प्राप्तस्याप्राप्तपक्षान्तरप्रापणं नियमः  
यथा समे यजेतेति, दर्शपूर्णमासाभ्यां यजेतेति यागः कर्त्तव्यतया विहितः  
स च देशमन्तरेण कर्त्तुमशक्य इत्यर्थादेशः प्राप्तः, स च समो विषमश्चेति  
द्विविधः, यदा यजमानः समे यियक्षते, तदा समे यजेतेति वचनमुदास्ते,  
स्वार्थस्य प्राप्तत्वात्, यदा तु विषमे देशे यियक्षते, तदा समे यजेतेति स्वार्थं  
विधत्ते, स्वार्थस्य तदानीमप्राप्तत्वात्, विषमदेशनिवृत्तिस्वार्थिकी, चोदित-  
देशेनैव यागनिष्पत्तेः अचोदितदेशोपादानेन यथाशास्त्रं यागो नानुष्ठितः  
स्यादिति, पथा प्राङ्मुखोऽन्यानि भुञ्जीतेति इदमपि स्मार्त्तमुदारणं पूर्व्वेण  
व्याख्यातम् । एकस्यानेकस्य प्राप्तस्यान्यतो निवृत्त्यर्थमेकस्य पुनर्वचनं  
परिसंख्या, तद्यथा इमामगृभ्णन् रशनामृतस्येत्यश्वाभिधानीमादत्त इत्ययं  
मन्त्रः स्वसामर्थ्यादश्वाभिधान्या गर्दभाभिधान्याश्च रशनाया ग्रहणे विनियुक्तः  
पुनरश्वाभिधानीमादत्त इत्यनेनाश्वाभिधान्यां विनियुज्यमानो गर्दभाभिधान्या  
निवर्त्तते तथा पञ्च पञ्चनखा भक्ष्या इत्यत्र हि यहच्छया आदिषु शशादिषु च  
भक्षणं प्राप्तं पुनः शशादिषु श्रूयमाणं श्वादिभ्यो निवर्त्तत इति ।”

(B) “स च विधिनिषेधरूपः शब्दसमूहोऽनेकशास्त्रान्तरावस्थानरूप-  
तया स्वतश्च प्रतिवाक्यमनेकवाक्यार्थप्रतिभानिरुद्धः प्रवतारतया महोर्मिमाळा-  
कुलार्णव इव दुरवगाहः,—तद्यथा क्वचिदग्निहोत्रं जुहोतीत्यादौ धात्वर्थमात्र-  
विधानं तस्माप्यग्निहोत्रविधानं तस्माप्यग्निहोत्रशब्दे गुणविध्याशङ्का, तथा किं  
होमः स्वर्गाय उत स्वर्गो होमायेति । एवं सर्वत्र । क्वचित् सोमेन  
यजेतेति त्रिविधं धात्वर्थविधानम् । अग्निहोत्रं जुहुयात् स्वर्गकाम इति फले  
विधिः क्वचिच्च सौर्यार्थादौ विशिष्टं फले विधीयते । दध्ना जुहोतीत्यत्र गुणे  
विधेयार्थापारपर्यवसानम् । क्वचिच्च प्राकाशावध्वर्यवे ददातीति बद्धात्वर्थ-  
नान्यसंबन्धविषयो व्यापारः । तथा क्वचिन्मुख्यार्थवृत्तित्ताशब्दस्य । क्वचित्  
सहस्रसंबत्सरादिवद्गुणवृत्त्या शब्दवृत्तिः । विध्यर्थवादसंमोहश्च परस्परतो  
रूपव्यतिषङ्गात् । श्रूर्पेण जुहोति तेन ह्यन्नं क्रियत इति विधिस्वरूपो  
ऽर्थवादः । रात्रीः प्रतितिष्ठन्ति, य एता उपयन्तीत्यर्थवादसरूपं रात्रीणां  
फले विध्यनमिति । दिङ्मासमिव दुरवगाहत्वे ।

## SEVENTH PAPER

The figures in the margin indicate full marks

## FIRST HALF

Examiner—MM. SITIKANTHA VACHASPATI

Full marks—50

1. अधस्थप्रश्नतयादन्यतमः प्रश्नः संस्कृतभाषया समाधेयः :—

(क) “आदार्यस्तु गोयुगम्” “आसुरो द्रविणादाना”दित्यादौ 10  
वराहोयुगादिग्रहणात् “न कन्यायाः पिता विद्वान् गृह्णीयात् शुक्लमन्वपीति-  
मनुवचनं विरुध्येत न वा ? किमल वा समाधानं कुल्लूकोक्तदिशा  
निरूप्यताम् ।

(ख) का नाम पञ्चसूनाः ? किं वा तस्य प्रमाणम् ? तन्निष्कृत्यर्थं 10  
कीदृशः प्रतीकारः ? स च कतिविधः सप्रमाणं निरूप्यताम् ।

(ग) आचार्यः उपाध्यायः गुरुः ऋत्विक् एतेषां परस्परवैशिष्ट्यं 10  
कीदृशम् अपि चेत्प्रमाणमारोहेत् स्मृतिपथं तर्हि समुल्लिख्यताम् ।

2. अधस्थप्रश्नचतुष्टयात् प्रश्नद्वयं समाधेयम् :—

(क) षट्कर्मको भवत्येषां सिभिरन्यः प्रवर्तते । 10

द्राभ्यामेकश्चतुर्थस्तु ब्रह्मसलेण जीवति ॥

कान्यस्य षट्कर्मादीनि ? तत्र च किं प्रमाणं किंवा ब्रह्मसलं किंवा  
तदाख्यावीजम् ?

(ख) पुस्तिका कतिविधा ? तस्य च किं प्रमाणम् ? पुस्तिकाकरणान्तरं 10  
पुत्रे जाते तया सह पुत्रस्य कीदृशो धनविभागः ? अपुत्रक-पुस्तिकामरणे च  
तद्धनं केन ग्राह्यम् ?

(ग) अध्यग्नि, अध्यावाहनिकं अन्वाधेयम् एतेषां किं स्वरूपं किं वा 10  
तस्य प्रमाणम् ?

(घ) स्त्रीणामसंस्कृतानान्तु लघ्वाच्छुध्यन्ति बान्धवाः । 10

यथोक्तेनैव कल्पेन शुध्यन्ति तु सनाभयः ॥

कुल्लूकोक्तदिशा व्याख्येयम् ।

3. अधोलिखितसूत्रचतुष्टयात्सूत्रद्वयं व्याख्येयम् :— 5 × 2 = 10

(1) श्रुतिर्हि बलीयस्यानुमानिकादाचारात् ।

(2) अथ यः पूर्वोत्थायी जघन्यसंवेशी तमाहुर्न स्वपितीति ।

(3) प्रोष्य च समागमे ।

(4) मनसा चानध्याये ।

4. अधोलिखितसूत्रचतुष्टयात्सूत्रद्वयं व्याख्येयम् : —

5 × 2 = 10

- (1) अनृत्यः पापिष्ठः ।
- (2) आचार्यपितृसखीनां च निवेद्य वचनक्रिया ।
- (3) नित्यं वा संस्कारविशिष्टम् ।
- (4) राज्ञश्च श्रोत्रियस्य ।

## SECOND HALF

Examiner—MM. KAMALKRISHNA SMRITITIRTHA

Answer ANY THREE questions, of which the LAST must be one

1. दक्षिणं बाहुमुद्धृत्य शिरोऽवधाय सर्वेऽंशे प्रतिष्ठापयति दक्षिणं 16  
कक्षमन्ववल्ग्वं भवत्येवं यज्ञोपवीती भवति ।

(क) सूत्रं व्याख्यायताम्, अनेन यज्ञोपवीतित्वस्य विधानं भवति न वा ? तद्विधायकमन्यच्चैत सूत्रं तदुल्लेख्यम् ।

2. एवमत ऊर्द्धं गृह्येऽग्नौ जुह्वयाद्वा हावयेद्वापि आजीवितावभृथात् । 16

(क) सूत्रमिदं व्याख्यायताम् एवमित्यनेन कः प्रकारः परिगृहीतः ? अत ऊर्द्धं कस्मादूर्द्धम् ?

अग्नेर्गृह्यत्वं कथं सम्पद्यते ?

3. परिधीनप्येके कुर्वन्ति शास्त्रलान् पाणीन् वा । 16

काऽस्य व्याख्या ? के तावत् परिधयः ? कुल कर्मणि कस्मिन्नवसरे एषामुपयोगः ?

4. भाषेतान्नसंसिद्धिमतिथिभिः कामं सम्भाषेत । 16

सूत्रं व्याख्यायताम् ।

(क) कस्तावदतिथिः ? को वा शब्दस्यास्य यौगिकसमाधान-प्रकारः ? सूत्रस्थितसम्भाषणपदस्य आलपनार्थत्वं किमूतान्यार्थता ? एतच्च सम्भाषणं वलिहरणकालेऽपि कर्त्तव्यं न वा ?

5. किं तावदन्वाहार्यम् ? कीदृक् समाख्यालभ्यं वा कर्म गृह्यसम्मतं 18  
यज्ञवास्तु, ब्राह्मैः सह संसर्गिणामपि प्रायश्चित्ताहता कस्य तावत् सूत्र-स्याभिप्रायेणावगम्यते तदुल्लेख्यम् ।



## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner—DR. AMARESWAR THAKUR, M.A., PH.D.*

*Full marks—75*

*Answer FOUR questions, including Question 2*

1. Give a brief account of the authors and works named by Sāyaṇa-Mādhavāchārya in his commentary on the *ācāra* and *prāyaścitta* chapters. Comment on the form *prāyaścitta* and explain the term. 17

2. (a) परिवित्तिः परिवित्ता यया च परिविद्यते । 24  
सर्वे ते नरकं यान्ति दातृयाजकपञ्चमाः ॥

Explain this verse. Under what circumstances is *parivedana* allowed?

(b) Quote Parāśara's text on the re-marriage of women. How does Mādhava explain it and what authority does he quote in support of his explanation?

3. (a) Explain :— 17

युगं युगद्वयञ्चैव लियुगञ्च चतुर्युगम् ।  
चाण्डालसूतिकोदक्या पतितानामधः क्रमात् ॥

How can a man free himself from the sin arising out of the violation of this rule?

(b) Write a short note on *snānacidhu* as you find it in the *Parāśarasmṛiti*

4. Explain, after Vijñāneśvara, any four of the following verses :— 17

- (a) जात्युत्कर्षो युगे ज्ञेयः सप्तमे पञ्चमेऽपि वा ।  
व्यत्यये कर्मणां साम्यं पूर्ववच्चाधरोत्तरम् ॥
- (b) कुशूलकुम्भीधान्यौ वा क्षराहिकोऽश्वस्तनोऽपि वा ।  
जीवेद्वापि शिलोच्छेन श्रोयानेषां परः परः ॥
- (c) अभियोगमनिस्तीर्य नैनं प्रत्यभियोजयेत् ।  
अभियुक्तं च नान्येन नोक्तं विप्रकृतिं नयेत् ॥
- (d) रुच्या वान्यतरः कुर्यादितरो वर्त्तयेच्छिरः ।  
विनापि शीर्षकात् कुर्यान्नृपद्रोहेऽथ पातके ॥
- (e) निह्नुते लिखितं नैकमेकदेशे विभावितः ।  
वाप्यः सर्वं नृपेणार्थं न ग्राह्यस्त्वनिवेदितः ॥
- (f) स्मृत्याचारव्यपेतेन मार्गेणाधर्षितः परैः ।  
आवेदयति चेद्राज्ञे व्यवहारपदं हि तत् ॥

5. What is the relation between *āgama* and *bhukti*? Discuss 17  
Viṣṇuśaṅkara's point of view on the whole question. Indicate briefly  
the rules regarding 'treasure-trove' as developed by this commentator.

6. Write a short thesis on the general principles of *dāyabhāga* 17  
or 'burden of proof'.

## SECOND HALF

Examiner—DR. SUDHINDRAKUMAR DAS, M.A., PH. D.

Full marks—25

Translate into Sanskrit :—

25

Yājñavalkya said : ' Behold, not indeed for the husband's sake the husband is dear, but for the sake of the self, is dear the husband. Behold, not indeed for the wife's sake the wife is dear, but for the sake of the self, is dear the wife. Behold, not for the sons' sake the sons are dear, but for the sake of the self, are dear the sons. Behold, not for the sake of the universe the universe is dear, but for the sake of the self, is dear the universe. The ātmā is verily to be seen, heard, minded, and meditated upon. Behold, O Maitreyī, by seeing, hearing, minding, knowing the self, all this (universe) is comprehended. The Brahma should disown a person, who considers the Brahma (caste) as something different from (his) self (ātmā); the Kṣātra should disown a person who considers the Kṣātra (caste) as something different from his self; the worlds should disown a person who considers the worlds as something different from his self; the gods should disown a person who considers the gods as something different from self. This (own) self is this Brahma, this Kṣātra, these worlds, these gods, these elements, are this universe. For, where there is duality, as it were, there sees another, another thing, there smells another, another thing, there hears another, another thing; but how does one to whom all has become mere soul (ātmā) smell anything, how see anything, how hear anything, how know anything?'

(GROUP D)

FIFTH PAPER

The figures in the margin indicate full marks

FIRST HALF

Examiner—DR. SURENDRANATH DAS GUPTA, M.A., PH.D.

Answer the FIRST or the SECOND and then ANY TWO of the rest

1. आत्मनि यदि जगदध्यस्तं स्यात् स्वप्रकाशाधिष्ठानामिन्नतया तस्य 20  
सर्वदेव भानापत्तिः कथं वारणीया ?

2. अविद्या प्रमाणगम्या न वा, प्रमाणगम्यत्वे नास्य अविद्यात्वम् । 20  
अतएव अप्रामाणिकी तुष्टैवाविद्या स्यात् । किमत्र समाधानम् ?

3. जगत्प्रपञ्चस्य व्यावहारिकत्वं मिथ्यात्वं चोपवर्णितम् । व्यवहार- 15  
विषयकत्वे अर्थक्रियाकारित्वात् सत्त्वमेव प्रसज्येत । तथा सति कथं  
मिथ्यात्वसंगतिः ?
4. अर्थापत्त्यनुमानयोः को भेदः ? कथं तावद् इतरेतरान्तर्भावो 15  
वारणीयः ? कथं वा तयोर्ब्रह्मसिद्धौ उपयोगः ? ब्रह्मभिन्नं जगत् सत्यं  
यथा परमाणुः इत्यनुमाने वा को दोषः ?
5. अनिर्वचनीयान्यथाख्यातयोः कतराद्वैतवादे स्वीक्रियते, कुल वा ? 15  
अस्य उत्पत्तिज्ञप्तिप्रकारौ यदि निरुक्तौ, तदा अनिर्वचनीयत्वं नितरां  
पारिभाषिकमेव स्यात्, तादृशपारिभाषिकत्वस्वीकारे ब्रह्मापि प्रकाश्यत्वाभावात्  
केषाञ्चित् पारिभाषिकमनिर्वचनीयं स्यात्, कथमत्र समाधिः ?
6. परिभाषोक्त-प्रत्यक्षप्रक्रिया निपुणं प्रदर्शयताम्, ज्ञानगतविषयगत- 15  
प्रत्यक्षस्वीकारे क उपयोगः ?

## SECOND HALF

Examiner—MR. SATKARI MUKHERJEE, M.A.

Full marks—50

Attempt ANY THREE questions, of which the LAST is compulsory

1. Write a short thesis to show how the Vedānta has succeeded in 12½  
avoiding the errors of the dualism and pluralism of the Sāṅkhya system  
and the universal negativism of the Mādhyanikas and offers a philosophy  
which is at once a synthesis and fulfilment of both.
2. Why is ānanda regarded as the very essence and nature of the 12½  
self or Brahman for that matter? What is the principle of division of  
ānanda into आत्मानन्द, योगानन्द, अद्वैतानन्द, ब्रह्मानन्द and विषयानन्द  
in the Pañcadaśi?

Or,

Write a short comment on the theory of perception as propounded  
in the Pañcadaśi. What is the difference between विषयप्रत्यक्ष (Perception  
of object) and ज्ञानप्रत्यक्ष (Perception of knowledge)? Is there any differ-  
ence in this respect between the positions of the Pañcadaśi and the  
Vedāntaparibhāṣā?

3. Discuss, according to the Siddhāntaleśa, whether perceptual illusion 12½  
is to be regarded as a unitary cognition or a synthesis of two cognitions  
and show how the philosophical difficulty involved in it has given rise to  
different theories.

Or,

Give a brief summary of the views relating to the omniscience  
(सर्वज्ञत्व) and the omnipotence (सर्वकर्तृत्व) of Brahman, as discussed in  
the Siddhāntaleśa.

4. Translate the following extract into English :—

25

ननु पृथिव्यादीनि सावयवानि भूतानि सकर्तृकानि कार्यत्वाद्-  
घटादिवदित्यनुमानेन इतरस्य कारणत्वासम्भवाद् जगत्कारणात्मकब्रह्मसिद्धौ  
किं वेदेन इति चेन्न, आकाशादिभूतोत्पत्तेर्वेदमन्तरेण केनापि ज्ञातुमशक्यत्वाद्  
तन्निष्ठकार्यत्वस्य असिद्धत्वेन हेतोः स्वरूपासिद्धत्वात् । न च वेदद्वाराभूतो-  
त्पत्तिर्ज्ञातव्या तथा च तन्निष्ठकार्यत्वसिद्ध्या न स्वरूपासिद्धौ हेतुरिति वाच्यम् ।  
तथैव वेदादेव जगत्कारणे ब्रह्मणि विज्ञाते सति अनुमानवैयर्थ्यापत्तेः,  
अस्मत्प्रवेशाच्च । एवं क्षित्यङ्कुरादीनां प्रसिद्धानां कार्याणामपि कार्यत्वेन  
लिङ्गेन न ब्रह्मानुमातुं शक्यम् । भूबीजजलजीवादीनां तत्कारणत्वकल्पना-  
सम्भवात्, अदृष्टकल्पनायाः अन्याय्यत्वाच्च । अतएव बोध्यम्, यत् यत्र  
कार्यत्वं दृश्यते, तत् तदुत्पत्तिः कर्तापि अनुमानेन साधितुं शक्यः,  
कृत्स्नस्य तु विश्वस्य वेदं विना कार्यत्वमप्रसिद्धम् । अतो जगत्कर्ताऽपि  
वेदादेव ज्ञातुं शक्यो न त्वनुमानसहस्रेण । न च प्रत्यक्षप्रमाणगम्यं ब्रह्म,  
तद्गृहणे हि साधारणानामिन्द्रियाणामसामर्थ्यात् । ... किञ्च सर्वज्ञो मन्त्रैः  
ऋषिभिश्च साकल्येन सर्वथाऽगम्यं दुर्बोधमविन्त्यानन्तगुणशक्त्यादिमद्  
जगत्कारणं ब्रह्म अनुमानादिवेद्यमिति कोऽनुन्मत्तो ब्रूयात् ॥

### SIXTH PAPER

*The figures in the margin indicate full marks*

### FIRST HALF

*Examiner*—MM. N. S. ANANTAKRISHNA SASTRI

*Full marks*—75

प्रथमसप्तमयोत्तरं कृत्वाऽन्येषां त्रयाणामुत्तरं कार्यम् ।

1. अध्यासकारणानि संगृह्य अहमित्यध्यासे तानि योजयित्वा 15  
“स्मृतिरूपः परत्वं पूर्वदृष्टावभासः” इति भाष्यं व्याख्यायताम् ।

*Or,*

ब्रह्मविचारेऽधिकारी कः ? कर्मविचारः वेदाध्ययनं कथं न ब्रह्म-  
विचारपूर्वकृतम् ? कथं च ब्रह्म प्रसिद्धमपि जिज्ञास्यम् ? सर्वं विविच्यताम् ।

2. ब्रह्मणि अनुमानं कथमप्रमाणम् ? ब्रह्मभिन्ननिमित्तोपादानमेव 21  
कथं सूत्रारूढम् ? तत्तु सगुणमुत निर्गुणमिति निष्कृष्य प्रतिपाद्यताम् ।

3. तृतीयाध्याये के के विषयाः प्रतिपादिताः ? कथं च तृतीयाध्यायेना- 12  
द्वैतसमर्थनं क्रियते ?
4. द्वितीयाध्यायनिरसनीयानि मतानि कानि ? को वा विरोधः केन 12  
केन मतेनाद्वैतमतस्य ?
5. अद्वैताभिमतमुक्तिस्वरूपं ससूत्रनिर्देशं संगृह्यताम् । 12
6. अद्वैतमतविरुद्धवत् प्रतिभासमानानि पञ्चसूत्राणि वेदान्तवाक्यानि वा 12  
संगृह्य कथं तेषामद्वैताविरोध इति प्रतिपाद्यताम् ।
7. अधोऽलिखितानामधिकरणानां विषयादिपञ्चकं निष्कृष्य प्रतिपाद्य- 24  
ताम् :—(१) आकाशाधिकरणम् । (२) सर्वज्ञ प्रसिद्धाधिकरणम् । (३) तद-  
नन्यत्वाधिकरणम् ।

## SECOND HALF

*Examiner*—MR. DEBENDRA NATH RAY, M.A.

1. Translate into Sanskrit *any one* of the following passages :—

25

(a) The universe is one, simple, unextended, indivisible Being, who is destitute of all qualities and attributes, but who is the true, the living, the happy. No description can be given of this Being. He is distinguished from illusory, inanimate, and visible appearances. He is sometimes said to be nothing, which must be understood merely to intimate a negation of sensible qualities, figure, extension, etc., and also of the mental affections, passion, etc. Whilst this Being remains in a state of rest, there is no visible world, or sensitive existences; but when at the impulse of desire motion is excited in him, all the variety of appearances and sensations are displayed. The question, how does desire arise in this simple Being, forms the subject of many disputes.

(b) Whenever the effects are produced, they are produced from their cause. They can never appear separated from their cause. Can you separate the pot from its cause—the clay? Can you separate the waves from their cause—the water? Can you regard them as something self-existent?

The effects are, in reality, the manifestations of their cause which without forfeiting its own identity, differentiates itself in these forms. A cow in repose and ruminating is called a cow. But when it gets up and walks, will it now be called a horse, and not the same identical cow?

Thus Brahman exists apart from relations, as well as in and through relations. It transcends the universe of Māyā, but there is no opposition between the world and its causal source.

## SEVENTH PAPER

## FIRST HALF

*Examiner*—MM. PROF. BHAGABAT KUMAR SASTRI, M.A. PH.D.

*The questions are of equal value*

*Full marks 75*

*Only THREE questions to be answered*

1. “परमार्थतो निरस्तसमस्तभेदविकल्पनिर्विशेषचिन्मात्रैकरसकूटस्थ-  
नित्यसंविदेव भ्रान्त्या ज्ञानज्ञेयज्ञानस्वरूपविविधविचित्रभेदा विवर्तत इति  
तन्मूलभूताविद्यानिर्वहणाय नित्यशुद्धबुद्धमुक्तस्वभावब्रह्मात्मैकत्वविद्याप्रति-  
पत्तये सर्व्वे वेदान्ता आरभ्यन्ते ।” What school of Vedānta holds this  
view? Fully explain that view-point. How does Rāmānuja argue against  
that view?

2. “स्थूलसूक्ष्मचिदचित्प्रकारं ब्रह्मैव कार्य्यं कारणञ्चेति ब्रह्मोपादानं  
जगत्, सूक्ष्मचिदचिद्रस्तुशरीरकं ब्रह्मैव कारणम् ।” How is this view  
established?

3. How is the view supported—“न लक्षणतो ब्रह्म प्रतिपत्तुं शक्यते”  
इति ? How is it refuted according to Rāmānuja school of thought?

4. How does Ramanuja arrive at the conclusion—आगमादृते कथमीश्वरः  
सेत्स्यति ? How does the Nyāya-Vaiśeṣika school seek to establish God with  
the help of inference? What defects in that mode of argument are pointed  
out by Rāmānuja?

5. “प्रवृत्तिनिवृत्तिप्रयोजनपरतयैव शास्त्रस्य प्रामाण्येऽपि ध्यानविधि-  
शेषतया वेदान्तवाक्यानां ब्रह्मस्वरूपे प्रामाण्यम् ।” What is this contention?  
What defect is pointed out in this contention? What is Rāmānuja's  
conclusion?

## SECOND HALF

*Examiner*—MM. GURUCHARAN TARKA-DARSANTIRTHA

*Full marks—25*

प्रथम-प्रश्नोत्तरं कृत्वा अवशिष्टेषु एकस्योत्तरं कार्य्यम् ।

1. बौद्धेषु परमाणुकारणवादः कया युक्त्या केषां सम्मतः ? तेषां परस्परं 15  
मतभेदोऽस्ति चेत् स कीदृशः ?

2. सांख्यसम्मतं प्रधानं कीदृशम् ? तत्त्वज्ञाने अद्वैतवादिसम्मता 10  
का युक्तिः ?

3. ब्रह्मणः प्रपञ्चरूपत्वे प्रपञ्चज्ञानान्मोक्षापत्तिः कथं वारणीया ? 10

4. सर्व्वेषां क्षणिकत्वे बौद्धसम्मता का युक्तिः ? कीदृशञ्च क्षणिकत्वं 10  
तेषां सम्मतम् ?

## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner*—MR. KOKILESWAR SASTRI, M.A.

1. 'All existence, in its essence, is but a manifestation of Force, and all knowledge may be considered as a reaction against the crowd of impressions, and therefore as an activity of Force—a potency, which in its highest development, reveals itself as human intellect.' 12

Prove by quotations from, or references to, the text of *छान्दोग्य* the above position.

2. 'When, dear one, bees prepare honey, they gather the juices from many sorts of trees and unite the nectar in one.' 12

Take the above illustration given in your text and show clearly what teaching is meant to be conveyed by it.

Or,

State the arguments by which the *Bhāṣyakāra* has sought to substantiate the following position :—

'Some say that this was non-existent in the beginning one only; that from this non-existent was born the existent. But how could this be? How could the existent be born from non-existent?'

3. Fully explain, after the manner of Śaṅkara, the significance of the term *प्राण* in the sentence 'प्राण-वन्धनं हि सौम्य मनः' quoted in his commentary on the *māndukya Kārikā* (1. 6). Here *प्राण* is shown to be the material cause of the world;—not a mere subjective *ajñāna* but an objective entity.

Support your explanation by quotations from the *bhāṣya*, if possible.

4. (i) A modern commentator seeks to show that 'work' (*कर्म*) is the main thesis of the *Gita* to which both *ज्ञान* and *भक्ति* are subordinated.

Discuss the point and give your own estimate of the relation among these three.

(ii) Explain any two of the following stanzas :—

(a) यत् सांख्यैः प्राप्यते स्थानं तद् योगैरपि गम्यते ।  
एकं योगञ्च सांख्यञ्च यः पश्यति स पश्यति ॥

(b) यो मां पश्यति सर्वज्ञ सर्वञ्च मयि पश्यति ।  
तस्याहं न प्रणश्यामि स च मे न प्रणश्यति ॥

(c) श्रेयं यस्तत् प्रवक्ष्यामि यज्ज्ञात्वाऽमृतमश्नुते ।  
अनादिमत्परं ब्रह्म न सत् तन्नासदुच्यते ॥

(d) ज्ञानं श्रेयं परिशता विविधा कर्मचोदना ।  
करणं कर्म कर्तैति त्रिविधः कर्मसंग्रहः ॥

(c) मत्स्थानि सर्वभूतानि न चाहं तेष्ववस्थितः ।  
न च मत्स्थानि भूतानि पश्य मे योगमैश्वरम् ॥

In extract (c), Brahman is described as neither *sat* (सत्) nor *asat* (असत्). It is also well-known that Vedānta calls the world of *nāma-rupa* as neither *sat* nor *asat*. How would you reconcile?

## SECOND HALF

Examiner—MR. BANAMALI VEDANTATIRTHA, M.A.

1. 'The word *upaniṣad* (उपनिषद्) is usually explained by *rahasyam* (रहस्यम्).' How did the word come to mean रहस्यम्? How does Śaṅkara explain the word उपनिषद्? Why is the *Bṛhadāraṇyaka upaniṣad* so called? To which Vedas do the *Bṛhadāraṇyaka* and the *Kaṭha upaniṣads* belong? Which of these two appears to be the older and why?

Or,

“अनात्मज्ञविषय एव धर्माधर्मादिलक्षणः संसारः न ब्रह्मज्ञस्य श्रुतिप्रामाण्यात् न्यायाच्च धर्माधर्माद्यनुपपत्तेः” ।

Critically examine the position laid down in this extract. Can a ब्रह्मज्ञ (*Brahmajña*) commit a sin or acquire merit or demerit by his activity? Quote the *śruti* (श्रुति) and *nyāya* (न्याय) referred to in the phrases श्रुतिप्रामाण्यात् and न्यायाच्च, and explain their application in the present case.

2. Explain fully any two of the following :—

10

(a) यः पूर्वं तपसो जातमद्भ्यः पूर्वमजायत ।

गुहां प्रविश्य तिष्ठन्तं यो भूतेभिर्व्यपश्यत । एतद्वैतत् ।

(b) इन्द्रियेभ्यः परं मनो मनसः सत्त्वमुत्तमम् ।

सत्त्वादधि महानात्मा महतोऽव्यक्तमुत्तमम् ॥

(c) तस्माद्ब्राह्मणः पाण्डित्यं निर्विद्य बाल्येन तिष्ठासेत् बाल्यं च पाण्डित्यञ्च निर्विद्याथ मुनिः अमौनं च मौनञ्च निर्विद्याथ ब्राह्मणः ।

(d) असतो मा सद् गमय तमसो मा ज्योतिर्गमय मृत्योर्माऽमृतं गमय ।

Or,

Give a short summary of either the first *Bṛhmana* of the third chapter or of the first *Bṛhmana* of the sixth chapter of the *Bṛhadāraṇyaka*.



3. Translate into English any two of the following :—

(a) य इमं च लोकं परञ्च लोकं सर्वाणि च भूतान्यन्तरो यमयति ( बृ० उ० ३।७।१ ) इत्युपक्रम्य श्रूयते यः पृथिव्यां तिष्ठन् पृथिव्या अन्तरो यं पृथिवी न वेद यस्य पृथिवी शरीरम् यः पृथिवीमन्तरो यमयति एष त आत्मान्तर्याम्यमृतः इत्यादि । तस्माधिदैवमधिलोकमधिभेदमधियज्ञमधि-भूतमध्यात्मं च कश्चिदन्तरवस्थितो यमयित्वान्तर्यामीति श्रूयते । तत्र संशयः, किमन्तर्याम्यधिदैवादिषु सर्वत्रैक एव, अथाधिदैवादीनां नामभेदाद् भिद्यत इति । अत्र ब्रूमः । अन्तर्याम्यधिदैवादिषु भगवानेव नान्यस्तादृशो भवितुमर्हति । कुतः ? तद्धर्मव्यपदेशात् । तेषां धर्मास्तद्धर्मा ते विशेषेण भगवति अपदिश्यन्ते । सर्वेषां तत् तत् कार्यसामर्थ्यं च भगवतो न तु स्वतस्तेषाम् इति ।

(b) शरीरश्च जीवो नान्तर्यामि ब्राह्मणे तत्तदभिमानिरूपो यस्य पृथिवी शरीरमिति वाक्यानुरोधेन भवितुमर्हति ततोऽपि भिन्नतयान्तर्यामिणो वचनात् । काष्ण्डवमाध्यन्दिनब्राह्मणद्वयेऽपि एवं जीवं भेदेनैवाधीयते ब्राह्मणाः । यो विज्ञाने तिष्ठन्निति काष्ठाः य आत्मनि तिष्ठन्निति माध्यन्दिनाः । न चात्मशब्देनान्यः सम्भवति ।

न च साङ्ख्यमतसिद्धमन्तर्यामिरूपमत्र भवितुमर्हति । कुतः अतद्धर्माभिलापात् । तद्धर्माणाम् अनभिलापात्, तद्विरुद्धधर्माणाञ्च अभिलापात् । न हि अत्र सत्त्वरजस्तमोगुणास्तत्कार्यं वा अभिलप्यते । तद्विरुद्धधर्माश्चैते यस्य पृथिवी शरीरमित्यादि ।

(c) येन यदन्यभिचारेण सिद्धयति तद्धि तस्य प्रमाणमुच्यते । वेदान्तवाक्यानां कथं ब्रह्मसाधकत्वमित्याकाङ्क्षायां चतुर्थाधिकरणमवतार्यते । तत्तु समन्वयात् । \* \* \* \* । वेदान्तवाक्यानां ब्रह्मणि तात्पर्यनिर्णायकानि कानि लिङ्गानीति चेत् उपक्रमादीनि । तथा पठन्ति

उपक्रमोपसंहारावभ्यासोऽपूर्वता फलम् ।

अर्थवादोपपत्ती च लिङ्गं तात्पर्यनिर्णये ॥

उपक्रमोपसंहारावेकं लिङ्गम् ।

एतैर्लिङ्गैर्ब्रह्मणि तात्पर्यमवगन्तव्यं वेदान्तवाक्यानाम् ।

(GROUP E)

FIFTH PAPER

*The figures in the margin indicate full marks*

FIRST HALF

*Examiner*—PANDIT KUNJABEHARI TARKATIRTHA

1. “सत्त्वमर्थक्रियाकारित्वं तच्च क्रमाक्रमाभ्यां व्याप्तं तौ चाक्षणिके 20  
न सम्भवतः, अतस्तौ क्षणिकत्वमापादयतः।” इति वृत्तिग्रन्थस्य प्रकृतोप-  
योगित्वसमर्थकं व्याख्यानमाख्याय कथमनेन क्षणिकत्वसिद्धिरिति  
सविशेषमुपपाद्यताम्।

2. सांख्यमतसिद्धं बन्धस्य किं स्वरूपं कारणं विनाशोपायश्च इति 15  
सयुक्तिप्रमाणं प्रतिपाद्यताम्।

अथवा

सांख्यमतसिद्धं पुरुषबहुत्वं इतरमतखण्डनपूर्वकं सूत्रवृत्त्यादिभिः  
स्थापनीयम्।

3. निम्नलिखित-सूत्राणां प्रकृतोपयोगित्वव्यापकं वृत्त्यनुसारिव्याख्यानं 15  
लिख्यताम् :—

चेतनोद्देशान्निभयः कण्टकमोक्षवत्। उपदेश्योपदेष्टृत्वात्तत्सिद्धिः।  
आभ्येशशक्तिसिद्धौ निजशक्तियोगः समान-न्यायात्।

अथवा,

विपर्ययाणां कति भेदाः कति वा तदवान्तरभेदा इति सूत्र-  
वृत्त्यादिभिर्विशेषतः प्रतिपादनीयम्।

SECOND HALF

*Examiner*—DR. PRABHATCHANDRA CHAKRABARTI, M.A., PH.D.*Full marks*—50

1. Explain any one of the following Kārikās according to the Bhāṣya :— 8

(a) रजस्य दर्शयित्वा निवर्त्तते नर्त्तकी यथा नृत्यात्।

पुरुषस्य तथात्मानं प्रकाश्य निवर्त्तते प्रकृतिः ॥

(b) जननमरणकरणानां प्रतिनियमादयुगपत् प्रवृत्तेश्च।

पुरुषबहुत्वं सिद्धं सैगुण्यविपर्ययाच्चैव ॥

2. Give the substance of the Sāṃkhya doctrine of inference.

17

Or,

Give a critical estimate of the theory 'सत उत्पत्तिर्नासतः ।'

Or,

Write an essay on 'अस्यात्मा शरीराद्व्यतिरिक्तः ।'

3. Translate the following extracts into English :—

25

(a) यथा कस्यचिद्वैराग्यमस्ति न तत्त्वज्ञानं तस्मादज्ञानपूर्वाद्वैराग्यात् प्रकृतिरूपो मृतोऽष्टासु प्रकृतिषु प्रधानबुद्धरहंकारतन्मात्रेषु कीयते न मोक्षः । ततो भूयोऽपि संसरति तथा योऽयं राजसो रागः यजामि दक्षिणां ददामि येनामुष्मिंल्लोकेऽत्र यद्विष्यं मानुषं सुखमनुभवाम्येतस्माद्राजसाद्रागात् संसारो भवति ।

(b) विशेषगुणदर्शनादितरस्य दुःखं स्यादिति । एवमानुश्रविकोऽपि हेतुर्दृष्टव्यः । कस्तर्हि श्रेयानिति चेत् । उच्यते । तद्विपरीतः श्रेयान् ताभ्यां दृष्टानुश्रविकाभ्यां विपरीतः श्रेयान् प्रशस्यतर इति । अविशुद्धि-क्षयातिशयायुक्तत्वात् । स कथमित्याह । व्यक्ताव्यक्तविज्ञानात् । अव्यक्तं प्रधानं ज्ञः पुरुषः । मूलप्रकृतिः प्रधानम्, प्रकृतिविकृतिसप्तकस्य मूलभूतत्वात् ।

### SIXTH PAPER

### FIRST HALF

Examiner—MM. PROF. BHAGABATKUMAR SASTRI M.A., PH.D.

The questions are of equal value

Full marks—50

THREE questions from A and ONE question from B to be answered

### A

1. Is the soul itself affected in any way in knowledge according to the Sāṃkhya system? Fully explain Bhikṣu's view-point in this connection.

2. If the origin of the universe is in Buddhittva, why should not the Sāṃkhya be regarded as purely idealistic? Explain logically the Sāṃkhya theory of evolution.

3. What sort of God is conceded by the Sāṃkhya? What is Patañjali's improvement upon it? Fully explain in this connection क्षीरवस्त्रेष्टितं प्रधानस्य.

4. Fully explain after Bhikṣu—जन्मादिव्यवस्थातः पुरुषबहुत्वम्. How is this व्यवस्था explained in the अद्वैत system? What defects are pointed out by Sāṃkhya in that contention?

5. Elaborate the Sāṃkhya conception of mukti and explain how it is attained.

## B

## 1. आत्मानात्मविवेकस्य किं स्वरूपम् ?

Explain after the manner of the सांख्यसार.

2. नैवाल्पबुद्ध्या शक्योऽयं विवेको वृत्तिबोधयोः ।  
तार्किका यत्तु संमूढाः सांख्यानां श्रद्धता यतः ॥  
विज्ञानवादिनो बौद्धा वृत्तिबोधविवेकतः ।  
ज्ञातात्मत्वश्रुतौ मूढा मेनिरे क्षणिकां चितिम् ॥

Fully explain.

## 3. “चित्तेरसुखरूपत्वं प्रेमा व्याख्यायतेऽधुना”

Give the gist of that explanation.

## SECOND HALF

Examiner—MR. NALINIMOHAN SASTRI, M.A.

The figures in the margin indicate full marks

THREE questions are to be attempted, of which the FIRST must be one

## 1. Translate into Sanskrit :—

25

Ether,

(a) While the *Vedānta* is a direct descendant of the *Upaniṣad* discussions, and systems of logic and atomism at least do not go out of their way to challenge orthodoxy, and ultimately adopt more and more the authority of the scripture, the *Sāṃkhya* system in its original form unquestionably marks a break with tradition. But this is a very different thing from claiming that the philosophy is not derived by legitimate process of development from ideas found in the *Upaniṣads*. The issue eventually turns on the interpretation to be given to the fact that a number of *Upaniṣads*, in special the *Kaṭha*, present features which may either be regarded as a preliminary stage in the development to the *Sāṃkhya*, or as the influence of an already existing *Sāṃkhya* on the *Upaniṣads*.

Or,

(b) The *Lalitavistara*, originally of the *Sarvāstivāda* school, gives a biography of the Buddha which has been altered in the sense of the *Mahāyāna* development of Buddhism. The book is full of miracles, including the tales which have been asserted to have spread to the west of the falling down of the statues before the young child when he visited the temple, and of his explaining to the teacher the sixty-four kinds of writing, including those of the Chinese and the Huns. In style the work is as much of a patch-work as in substance. It is written in prose in Sanskrit, with verse portions in mixed Sanskrit; these do not normally carry on the prose account, but run parallel with it, giving it in brief form. The ballads of this sort are often clearly old, as shewn by comparison with *Pāli* tradition.

2. Define *Puruṣa* and determine the nature of its connexion with 12½

*Prakṛti*. If this connexion is non-existent (असत्), how can it serve as a motive for bondage? How is *Buddhi* related to *Puruṣa* in bondage? The view of *Vācaspati Miśra* on those points should be discussed.

3. (a) Distinguish between the प्रत्ययसर्गः and the भावः and 7½  
determine the functions of both.
- (b) Is time (kāla) an essential entity according to the Sāṃkhya? 5  
Give their reasons for the view held.
4. (a) What are the कषायः? How are they to be avoided? 6
- (b) Determine Prakṛti's motive for creation according to the 6  
Sāṃkhya.

## SEVENTH PAPER

The figures in the margin indicate full marks

## FIRST HALF

Examiner—MM. PANDIT SITARAM SASTRI

Full marks—75

FIVE questions to be answered but no group should be left out

## A

- (i) विकल्पस्मृत्योर्लक्षणे ससूत्रोपन्यासमुपन्यस्य भाष्योक्ततदुदा- 15  
हरणेषु तत्समन्वयं प्रदर्श्य स्मृतेरवान्तरभेदाः सोदाहरणावुच्यन्ताम् ।
- (ii) नित्यैकचित्तास्वीकर्तृमतं सयुक्तुपक्षिप्यैकचित्तस्वीकारावश्यकत्वं 15  
व्यवस्थापयत । सावान्तरभेदं सोदाहरणं सशब्दनिर्वचनं संप्रज्ञातयोगं  
प्रदर्श्य तत्फलमाह्वयत ।
- (iii) उभयविधयोगप्रदर्शनेनैव गतत्वे पुनः सावान्तरभेदसमापत्ति- 15  
वर्गनस्य का अपेक्षाः ? कतिविधाः समापत्तयः ? कास्ताः ? सूत्रोक्त एव  
तासामनुष्ठाने क्रमो विपरीतो वा ? अन्ये कथं सः ? भाष्योक्तं कारणस्य  
नवविधत्वमुदाहरणसहितं प्रदर्श्य तत्र योगस्य कीदृशं कारणत्वम् इति  
निरूपयत ।
- (iv) परिणामतापसंस्कारदुःखैर्गुणवृत्तिविरोधाच्च सर्वमेव दुःखं 15  
विवेकिनः । निमित्तमप्रयोजकं प्रकृतीनां वरणभेदस्तु ततः क्षेत्रिकवत् ।  
इमे सूत्रे यथाभाष्यं सम्यग्व्याख्याय क्षणस्वरूपविवेचनपूर्वं तत्प्रविभाग-  
संयमफलं यथाभाष्यं प्रदर्श्यताम् ।
- (v) भाष्यानुसारेण कायस्याशुचित्वं व्यवस्थाप्य शब्दस्य स्फोटरूपत्वं 15  
सोपपत्तिं यथाभाष्यं प्रतिपादनीयम् ।

## B

मीमांसकानां नैयायिकानां च मते आत्मनश्चैतन्यमात्ररूपतास्वीकार- 15  
स्यावश्यकत्वं यथाभोजवृत्ति व्यवस्थाप्य शब्दार्थप्रत्ययानां परस्पराध्यासात्सं-  
करस्तत्प्रविभागसंयममात्सर्वभूतरुतज्ञानम् इति सूत्रं भोजवृत्त्यनुसारेण  
व्याख्यायताम् ।

C

(i) “एकमेव दर्शनं ख्यातिरेव दर्शनम्” इति पञ्चशिखाचार्यवचनस्य 15  
तात्पर्यं यथावाचित्किमालिख्य, आनन्दास्मितानुगतसंप्रज्ञातस्य प्रतिस्व  
द्वैविध्यमितिमतमुपपाद्य वाचित्करीत्या निरस्यत ।

(ii) मोक्षदशायां वेदान्त्यभिमतमद्वैतमानन्दरूपत्वं च वाचित्करीत्या 15  
निरस्याद्वैतबोधकवाक्यानामुपपत्तिः प्रदर्शयताम् ।

(iii) भावनायाः स्वविषयसाक्षात्कारहेतुत्वेन कथमीश्वरभावनायाः 15  
स्वात्मविषयकसाक्षात्काररूपसंप्रज्ञातसाधकत्वमिति वाचित्करीत्या प्रदर्शयत ।  
आत्मनो ज्ञेयत्वं भवति न वा ? आद्ये पक्षे कथं न कर्तृकर्मविरोधः ?

## SECOND HALF

Examiner—DR. SUDHINDRAKUMAR DAS, M.A., PH.D.

1. Translate into English either (a) or (b) :—

25

(a) ननु न ब्रह्मणा सह जीवस्य ऐक्यमुपपद्यते । तथाहि सच्छब्द-  
वाच्यं जगत्कारणं ब्रह्म, “सदेव सौम्येदमग्र आसीत्” इत्यादिवाक्येन  
प्रतिपादितम् । जगत्कारणं च प्रधानम् अचेतनम् इति सांख्याः ।  
पशुपतिरेव जगत्कारणम् ; स च चेतनोऽपि जीवाद्भिन्नः स उपास्य एव इति  
पाशुपताः । भगवान् वासुदेवः ईश्वरः जगत्कारणम्, तस्मादुपपद्यते  
संकर्षणाख्यो जीवः तस्मात्मानः प्रद्युम्नः ; ततोऽहङ्कारः अनिरुद्धः ; तेन  
कार्यत्वात् जीवस्य तेन सह ब्रह्मणः वासुदेवस्य अत्यन्तभेदः इति पाञ्च-  
रात्रिकाः । परिणामिनित्यः सर्वज्ञः भिन्नाभिन्नः इति जैनाः सिद्धिन्धनश्च ।  
अस्ति नित्यज्ञानादिमान् ईश्वरः सर्वज्ञः पृथिव्यादिकार्यलिङ्गानुमितः ; स  
च जीवाद्भिन्न एव इति तार्किकाः । क्षणिकः सर्वज्ञः इति सौगताः ।  
कृशकर्मविपाकाशयैः अपरामृष्टो नित्यज्ञानरूपः प्रधानांशसत्त्वगुणप्रति-  
फलिततया सर्वज्ञः संसारिविलक्षण एव इति पातञ्जलाः । अद्वितीयपरमानन्द  
एव ब्रह्म ; तच्च जीवस्य वास्तवं स्वरूपम्, मायया च सर्वज्ञत्वादिविशिष्टं  
जगतः उपादानं निमित्तं च इति औपनिषदाः ।

(b) तत्र हि परमकारणे व्योमाकारे शिवतत्त्वे सर्वशब्दनिदानतया  
अन्तरत्यन्तसूक्ष्मो नादोऽनभिगम्यको वर्त्तत इति गुरुभिरनुभूयते । अतएव  
तस्य परसंज्ञा च । तथा च तस्मात् शक्तितत्त्वाविर्भावकाले सर्वशब्दसमु-  
दायात्मकोऽसौ स्फोटरूपः क्लिप्तोऽभिगम्यज्यते । यत एतदाश्लिष्टं शक्तितत्त्वमपि  
परविन्दुसंज्ञं भवति । अथैतस्मात् तत्त्वाश्लेषेणैव वर्णसमुदायात्मकोऽक्षर-  
विन्दुरूपः । अयमेव अपरविन्दुः । तस्मात् ईश्वरतत्त्वाश्रयिणः सूक्ष्मा

वर्णाः । तेभ्यश्च शुद्धविद्यातत्त्वाश्रयाः स्थूला वर्णाः क्रमेण सम्भूताः ।  
अतएव कार्यतत्त्वचतुष्टयाश्रयाः चतुर्विधाः शब्दाः क्रमेण परा पश्यन्ती  
मध्यमा वैखरीति वाग्वृत्तिचतुष्टयात्मना विश्वार्थवाचका भवन्ति ।

### EIGHTH PAPER

Examiner—MM. DURGACHARAN SANKHYA-VEDANTATIRTHA

### FIRST HALF

( पूर्ण-संख्या ५० )

प्रथममुत्तीर्य शिष्टानां द्वयमुत्तार्यम् ।

1. “वर्षातपाभ्यां किं व्योम्नश्चर्मण्यस्ति तयोः फलम् ।  
धर्मोपमश्चेत् सोऽनित्यः खतुल्यश्चेदसत्फलः ॥” 18

श्लोकोऽयं विशदीकृत्य तथा व्याख्यायताम्, येनात्र प्रस्तुतोऽर्थः सम्यक्  
स्फुटतरो भवेत् ।

श्लोकोऽयं यदर्थमिह समुद्धतः, सोऽर्थः कस्याभिमतः ? कीदृशश्च सः ?  
अनेन वा कया दिशा समर्थितः ? इत्येतत् सर्वं यथायथं निरूप्यताम् ।

2. पञ्चस्कन्धवादः कीदृशः कस्य वाभिमतः ? एतादृशवादाङ्गीकारे 16  
का नामेष्टसिद्धिः ? स्कन्धानां स्वरूपदर्शनपूर्वकं सृष्टौ मुक्तौ च कीदृश  
उपयोगस्तेषामिति निरूप्यताम् ।

3. औलुक्यदर्शने परिगणिताः पदार्था नामतो रक्षणतश्च निरूप्यन्ताम् । 16  
तन्मते अनुभूयमानानां शक्ति-सादृश्य-तमसां पदार्थत्वमस्ति न वा ? अस्ति  
चेत्, कथं न परिगणना ? नास्ति चेत्, कथं वा नानुभवापलापः ? इत्येतत्  
समाधीयताम् ।

4. “असतः सज्जायते इति सौगताः । सतोऽसज्जायते इति नैयायिकाः । 16  
सतो विवर्तः कार्यजातम्, न वस्तुसत् इति वेदान्तिनः । सतः सज्जायते इति  
सांख्याः” इति ।

एवं जगतः कार्य-कारणभावे विप्रतिपत्तिपरमेतन्मतचतुष्टयं विशेषेण  
व्याख्याय युक्तिः सांख्यमतं समर्थयताम् ।

5. वर्णानामर्थप्रत्यायकत्वे सम्भवत्यपि किमिति पाणिनिना अननुभव- 16  
गोचरः स्फोटोऽङ्गीकृतः ? स्फोटस्य किं रूपम् ? कुत उत्पत्तिः ? कुल वा  
स्थितिः ? कया रीत्या चार्थप्रत्यायकत्वम् ? एतत् सर्वमभिधाय वर्णस्फोटवत्  
पदवाक्ययोरपि स्फोटोऽस्ति नास्ति वेति युक्तिः प्रतिपाद्यताम् ।

## SECOND HALF

Examiner—MR. SATKARI MUKHERJEE, M.A.

Answer THREE questions, of which the LAST must be one

1. Write a short thesis on the place of *Vairāgya* in the philosophical and spiritual life of man. Is this *Vairāgya* a reflex of morbid asceticism and self-humiliation or a vehicle of higher progress and perfection? Discuss. 12½
2. Childhood has been regarded as a period of innocent happiness and youth is believed to be the field of self-expansion and self-glorification. What is the attitude of the *Yogavāsīṣṭha* towards these two stages of life? Is it in conflict with the aforementioned view? Give your reasons as to which of the two views is philosophically sounder and whether a reconciliation between them is possible or not? 12½
3. Give a summarised version of the vanity of all earthly good things—youth, wealth, conjugal happiness and power, and the like according to the *Yogavāsīṣṭha*. 12½
4. Translate the following passage into Sanskrit :— 25

To a superficial reader the idealism of the *Yogavāsīṣṭha* may appear to be identical with the Vedānta as interpreted by Śaṅkara; and in some of the later Vedānta works of the Śaṅkara school, such as the *Jīvanmukti-viveka*, etc., so large a number of questions dealt with in the *Yogavāsīṣṭha* occur that one does not readily imagine that there may be any difference between this idealism and that of Śaṅkara. This point therefore needs discussion.

The main features of Śaṅkara's idealism consist in the doctrine that the self-manifested subject-objectless intelligence forms the ultimate and unchangeable substance of both the mind (*antaḥkāraṇa*) and the external world. Whatever there is of change and mutation is outside of this Intelligence, which is also the Reality. But, nevertheless, changes are found associated with this reality or Brahman, such as the external forms of objects and the diverse mental states. These are mutable and have therefore a different kind of indescribable existence from Brahman; but still they are somehow essentially of a positive nature.

(GROUP F)

## FIFTH PAPER

The figures in the margin indicate full marks

## FIRST HALF

Examiner—PANDIT PANCHANAN TARKAVAGISH

अधोलिखितेषु प्रश्नेषु त्वयं समाधेयम् ।

1. “प्रमाणादि-पदार्थतत्त्वज्ञानाग्निः श्रेयसाधिगमः ।”

25

अत्र तत्त्वज्ञानपदस्य कोऽर्थः ? यदि ज्ञानमर्थः, तर्हि अक्षपादप्रणीत-  
शास्त्रस्य कथं निःश्रेयसाधिगमहेतुत्वं सङ्गच्छते ?



2. “प्रमाणतोऽर्थप्रतिपत्तौ प्रवृत्तिसामर्थ्यादर्थवत् प्रमाणमिति भाष्यम् ।” 25

अत्रेदं पृच्छते, प्रमाणस्यार्थप्रतिपत्तिहेतुत्वं कीदृशम् ? स्वरूपेण ( बोधकत्वमात्रेण ) तत्त्वेन ज्ञायमानतया वा ।

१म-पक्षे बोधकत्वस्य प्रमाणाभासेऽपि सत्त्वात् तेन रूपेणार्थप्रतिपत्ति-हेतुत्वं न सङ्गतम् ।

२य-पक्षे तत्त्वेन ज्ञायमानत्वस्यापेक्षणीयत्वे तादृशतत्त्वज्ञानस्य प्रमाणाधीनतया प्रमाणान्तरस्यापेक्षा स्यात्, एवं रीत्याऽपेक्षितप्रमाणान्तरस्यापि तत्त्वेन ज्ञायमानत्वस्यापेक्षा वर्तते, तथाच सति अनवस्था प्रसज्यते । अत्र कः समाधिः ?

∴ “अर्थवत् प्रमाण”मिति ।

25

\* प्रमाणस्यार्थवत्त्वं कीदृशम् ? ।

प्रमाणपदस्य प्रमितिजनकार्यकतया प्रमितिजनकत्वस्य प्रमातर्यस्यि सत्त्वेन प्रमातरि प्रमाणत्वं कथं नातिव्याप्तम् ?

4. वृत्तिकाररीत्या निर्विकल्पक-प्रत्यक्षस्य प्रमायामन्तर्भावः समर्थनीयः । 25

5. वादलक्षणं प्रदर्श्य वादविशेषणानामुपयोगिता प्रदर्श्यताम् । 25

6. हेत्वाभासानां निग्रहस्थानान्तर्भूतत्वेऽपि तेषां पृथगुपदेशबीजं विशदं विव्रियताम् । कीदृशं वा हेत्वाभासलक्षणम् ? 25

## SECOND HALF

Examiner—PANDIT GOPINATH KABIRAJ

Full marks—25

1. Translate into English any two of the following extracts :—

(a) अविद्यातृष्णे धर्माधर्मौ च जन्मकारणम् । तत्त्वविदश्च तत्त्व- 12½  
विच्चादेव नाविद्या मिथ्याज्ञानात्मिका भवति । दोषाणां तु प्रथमे दर्शित एव क्रमः । तदभावे भवन्तावेव धर्माधर्मौ न बन्धाय कल्पेते, नहि स्वकार्यमङ्कुरादि कुसूलवर्तिनि बीजानि जनयितुमुत्सहन्ते । भृष्टबीजानामपि स्वरूपशक्तिरपि तानवं गता, तद्वत् कर्मणां स्वरूपशक्तिसौथिल्यं मा नाम भूत् तथापि कुसूलवर्तिबीजवत् सहकारिवैधुर्यात् कार्यानां रम्भः ।

(b) विविधं तावत् कमं । किञ्चिदैहिकफलमेव, किञ्चिदनियतफलमेव, 12½  
किञ्चिदामुष्मिकमेवेति कल्पना । तत्र कारीर्यादि तावदैहिकफलमेव—तद्धि सकलजनपदसन्तापकारिणि महत्यवग्रहे प्रस्तूयते, वृष्टिलक्षणं च तत्फलं स्वभावत एव सकललोकसाधारणम् आसन्नतयैव तदभिलषणीयमिति सद्य एव भवितुमर्हति । वचनानि च तत्र तादृश्येव दृश्यन्ते—यदि वर्षेत् तावत्येवेष्टि

समापयेद् यदि न वर्षेत् श्वोभूते जुहुयादिति । आमुष्मिकफलं तु कर्म ज्योतिष्टोमादि फलस्वभावमहिम्नैव पारलौकिकफलं भवति ।

(c) श्रवणादिषु मुमुक्षूणामेवाधिकारः । काम्ये कर्मणि फलकाम- 12½  
स्याधिकारित्वात् । मुमुक्षायां च नित्यानित्यवस्तुविवेकस्येहामुल्लेखभोग-  
विरागस्य शमदमोपरतितितिक्षासमाधानश्रद्धानां विनियोगः । अन्तरिन्द्रिय-  
निग्रहः शमः । बहिरिन्द्रियनिग्रहो दमः । विक्षेपाभाव उपरतिः । शीतो-  
ष्णादिद्वन्द्वसहनं तितिक्षा । चित्तैकाग्र्यं समाधानम् । गुरुवेदान्तवाक्येषु  
विश्वासः श्रद्धा । उपरमशब्देनाह संन्यासोऽभिधीयते । तथा च  
संन्यासिनामेव श्रवणादावधिकार इति केचित् ।

### SIXTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Examiner—PANDIT PANCHANAN TARKAVAGISH*

*Full marks—50*

अधोलिखितेषु प्रश्नेषु द्वयं समाधेयम् ।

1. सत्स्वपि अन्येषु पदार्थेषु भगवतोऽक्षपादस्य षोडशपदार्थमात्रनिबन्धनं 25  
किमर्थमिमांसाशङ्कामपनेतुं किं समाहितं जयन्तेन ?
2. अनेकानभिमतसामग्रीप्रमाणतावादस्थापनस्य किं वीजं प्रदर्शितं 25  
जयन्तेन ? तत्प्रदर्श्य प्रमाणसामान्यलक्षणं प्रदर्शय ।
3. मीमांसकसम्मत-ज्ञानप्रमाणतावादः कया युक्त्या खण्डितो जयन्तेन ? 25  
तां युक्तिं प्रदर्शय ।
4. बौद्धानुमोदित-ज्ञानप्रामाण्यं यथा युक्त्या प्रतिषिद्धं जयन्तेन, तां 25  
युक्तिं प्रदर्शय ।

#### SECOND HALF

*Examiner—MM. GURUCHARAN TARKA-DARSANTIRTHA*

*Full marks—50*

प्रथमस्य पञ्चमस्य उत्तरं कृत्वा इतरेष्वेकतमस्य उत्तरं कार्यम् ।

1. केनोपपद्येन कया युक्त्या ज्ञानस्य स्वप्रकाशत्वं साधितं खण्डनकृता ? 10
2. विषयविषयिभावे भेदस्य प्रयोजकत्वम् अस्ति न वेति संशयनिरासे 15  
का युक्तिः ?

3. केनोपपट्टम्भेनोत्थापितं कीदृशं कर्मलक्षणं कया युक्ता खण्डितं 15  
 श्रीहर्षेण ?
- 4 “ये च मानमेयभावाश्रया दोषाः कीर्त्तनीयाः तेपि प्रसज्येरन्” इति 15  
 ग्रन्थोत्थाने क उपपट्टम्भः ? के च ते दोषाः ?
5. अधस्तनप्रबन्धयोरेकतरस्य संस्कृतभाषया अनुवादः कर्त्तव्यः— 25

## A

At the time when the different systems of Indian Philosophy became first known to the scholars of Europe everything that came from the East was looked upon as of extreme antiquity. There had been vague traditions of ancient Indian Philosophy even before the time of Aristotle. Alexander himself, we are told, was deeply impressed with that idea, and we may gather from his desire to communicate with the gymnosophists of India.

## B

In answering the question, What is knowledge, Gotama declares in this place quite clearly that real knowledge belongs to the Ātman only, the self or the soul. It cannot belong to the senses and their objects (Indriyārtha), because knowledge abides even when the senses and what they perceive have been suppressed. Nor does knowledge belong to the Manas, which is but the instrument of knowledge, but it arises from the conjunction of Ātman (self) with Manas (attention), and on the other side of Manas with Indriyas (senses). Manas is the instrument, and the wielder of that instrument, like the wielder of an axe must be some one different from it, this, according to the Nyāya, can only be the self who in the end knows, who remembers, who feels pain and pleasure, who desires and acts.

## SEVENTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner*—MM RAMKRISHNA TARKATIRTHA

1. अलौकिकस्य परलोकसाधनस्याभावात् अत्र अलौकिके, परलोके, 20  
 साधने, विशिष्टे च प्रत्येकं कोटिद्वयमुखिष्य विप्रतिपत्तिः प्रदर्श्यताम् ।

2. सोपपट्टम्भं व्याख्यायताम्— 15

- (क) एकस्य न क्रमः क्वाऽपि  
 वैचित्र्यञ्च समस्य न ।  
 शक्तिभेदो न चाऽभिन्नः  
 स्वभावो दुरतिक्रमः ॥

अथवा,

- (ख) न वैजात्यं विना तत्स्यात् न तस्मिन्ननुमा भवेत् ।  
 विना तेन न तस्मिन्निर्नाभ्यर्थं निश्चयं विना ॥

3. (क) अनुपलब्धेरभावप्रत्यक्षकरणत्वखण्डनप्रकार उदयनरीत्या 15  
प्रदर्शयताम् ।

अथवा,

उदयनसम्मतकार्यत्वहेतुकेश्वरानुमाने असिद्धिमुद्गाढ्य तत्खण्डनरीतिः  
विशदीकृत्य प्रदर्शयताम् ।

## SECOND HALF

Examiner—MM. S. KUPPUSWAMY SASTRI, M.A.

1. बाह्यप्रत्यक्षे षड्विधानामपि लौकिकसंनिकर्षाणामावश्यकतां सविमर्शं 12½  
समर्थयत ।

अथवा,

अलौकिकसंनिकर्षाणां षड्विधानामपि स्वरूपं विशदीकृत्य आवश्यकतां 12½  
सविमर्शं निर्वहत ।

2. (A) व्याप्तेः पूर्वपक्षलक्षणस्य सिद्धान्तलक्षणस्य च भेदं निरूप्य, 12½  
पूर्वसारुचिबीजमुद्घाटय, सिद्धान्तलक्षणस्य 'कालो घटवान् कालपरिमाणात्'  
इत्यत्र अव्याप्तिमुद्गाढ्य तत्परिहारप्रकारं विशदयत ।

अथवा,

(B) (1) बाधस्य असिद्ध्या व्यभिचारेण च गतार्थतामुद्गाढ्य 12½  
परिहरत ।

(2) सत्प्रतिपक्षस्थले संशयरूपानुमितिर्भवति वा न वेति  
विचार्य निर्णयत ।

3. Translate into Sanskrit :—

25

The Nyāya-Vaiśeṣika is a self-contained system of philosophy. Its roots strike deep into its pluralistic realism. Its scheme of external relation, its theory of truth and error, and its creationistic view of causation constitute its mainstay. Its thought-measuring devices and precise formulas form its ever-spreading and never fading foliage. Its fruit is the virile, though negativistic, doctrine of non-existence and final liberation. Its chief solace and comfort is in its rationalistic theism. Its chief boast is its logical and dialectic machinery, which the believers and heretics alike cannot do without. Whoever knows Nyāya is conversant with the philosophy of knowledge.

## EIGHTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner*—MM. GURUCHARAN TARKA-DARSHANTIRTHA

*Full marks*—75

प्रथमप्रश्नस्योत्तरं कृत्वा अवशिष्टेषु खयाणामुत्तरं कार्यम् ।

1. गौतमोक्तानां प्रमाणावयववादप्रयोजनानां कणादोक्तेषु पदार्थेषु कुत्र 15  
कस्यान्तर्भावः ?
2. प्रतिशरीरं मनस एकत्वे ससूत्रयुक्तिः प्रदर्शयताम् । 20
3. अवयवान्त्यावयवि-प्रागभावानां कस्य किं लक्षणम् ? 20
4. को महोदयः ? तत्र च को हेतुः । 20
5. कालदिगात्मनां परस्परं भेदः किंप्रमाणकः ? 20
6. आत्मनः शरीरादिभिन्नत्वे प्रशस्तपादसम्भता युक्तिः कीदृशी ? 20
7. कति विशेषगुणाः ? तेषां कस्य कीदृशं विशेषत्वम् ? 20

## SECOND HALF

*Examiner*—PANDIT VIDHUSEKHAR SASTRI

*Full marks*—25

Translate any one of the following passages :—

25

(a) मीमांसकास्तु अज्ञातार्थगोचरज्ञानं प्रमेत्याहुः । प्रमात्वं च स्वतो ग्राह्यमिति । तथाहि । येनैव ज्ञानं गृह्यते तेनैव तद्वत् प्रमात्वमपि । ज्ञानं च मुरारिमतेऽनुव्यवसायेन गृह्यते । इदं रजतमिति व्यवसायानन्तरम् इदं रजतं जानामीत्यनुव्यवसायो मनसि जायते । अत्र ज्ञाने रजतत्वं विषयः । तस्मिंश्च गृह्यमाणे तद्वत् तद्वति तत्प्रकारकत्वमपि गृह्यते । भट्टमते तु ज्ञानमतीन्द्रियं ज्ञानजन्यज्ञाततयानुमीयते । न च ज्ञाततया मानाभावः । घटादिज्ञानानन्तरं मया घटो ज्ञात इत्याद्यनुभवस्यैव प्रमाणत्वात् । न चायमनुभवो ज्ञानविषयत्वमवगाहते, न तु तद्व्यतिरिक्तज्ञाततामिति वाच्यम् । ज्ञानविषयत्वातिरिक्तज्ञाततानङ्गीकारे घटं जानामीत्यादौ घटादेशानक्रिया-जन्यफलशालित्वविरहेण कर्मत्वाभावप्रसङ्गात् । अतो ज्ञानजनितज्ञातत्वरूप-छिन्नेन घटादिज्ञानेऽनुमीयमानै स्वगतं प्रमात्वमपि गृह्यत इति ।

(b) नन्वस्ति तमोऽपि द्रव्यं क्रियावत्त्वाद् रूपवत्त्वात् परत्वा-  
परत्वाश्रयत्वाच्च । न च क्रियावत्त्वमसिद्धम् । चलति च्छायेति प्रत्ययात् ।  
नीलं तम इति प्रत्ययाच्च रूपवत्त्वमपि सिद्धम् । इदं तमः परमिदं  
तमोऽपरमिति प्रतीतिश्च परत्वापरत्वे अपि । तदुक्तम्—

तमः खलु चलं नीलं परापरविभागवत् ।

प्रसिद्धद्रव्यवैधर्म्यान्नवभ्यो भेत्तुमर्हति ॥

इति चेत् । मैवम् । रूपवत्त्वे क्रियावत्त्वे च बाह्यालोकनिरपेक्षचक्षुर्वैद्यत्वानु-  
पपत्तेः । किञ्च रूपवत्त्वे स्पर्शवत्त्वमपि स्यात् । अस्त्येवासावनुद्भूत इति  
चेन्न । रूपोद्भवे स्पर्शोद्भव-ध्रौव्यात् । पृथिव्यामियं व्याप्तिरिदं तु दशमं  
द्रव्यमिति चेन्न । नीलरूपत्वसिद्धौ पार्थिवत्वसिद्धेः । पृथिव्यामपि नार्थं  
नियमो धूमे रूपोद्भवेऽपि स्पर्शानुद्भवादिति चेन्न । गोलकावच्छेदेन  
धूमस्पर्शस्यापि ग्रहात् ।

(GROUP I)

FIFTH PAPER

*The figures in the margin indicate full marks*

FIRST HALF

*Examiner*—HEMCHANDRA RAYCHAUDHURI, M.A., PH.D.

*Full marks*—70

1. Form an estimate of Kalhapa as a historian. 16

Or,

Discuss the value of the materials utilised by Kalhapa in writing the *Rājatarāṅgiṇī*. 16

2. What information can be gathered from the Kashmir Chronicle as to the religious and political history of North-West India during the Maurya and Kushān periods ?

Or,

Summarise Kalhapa's account of the campaigns of Lalitāditya, adding critical and explanatory notes where necessary. 16

3. Explain any three of the following passages :— 18

(a) तस्य पञ्च महाशब्दान् ज्यायानुत्पलकोऽग्रहीत् ।

अन्ये जगृहिरेऽन्यानि कर्मस्थानानि मातुलाः ॥

(b) भ्राता द्वैमातुरस्तेन शूरवर्माभिधः सुधीः ।

ज्ञातिप्रियेण वितते यौवराज्येऽभ्यषिच्यत ॥

- (c) पार्थिवैकाङ्ग-सामन्त-मन्त्रिकायस्थतन्त्रिणाम् ।  
तन्त्रोत्था द्रोहवृत्तीनां द्रोहाद्वैतमदृश्यत ॥
- (d) तस्यासन् रुद्रपाळाद्याः शाहिपुत्राः परं प्रियाः ।  
अनल्पवेतनादानैराज्योत्पत्त्यपहारिणः ॥
- (e) नान्यः स इव कालेस्मिन्दृशे भूतिमाङ्गपः ।  
गह्वर्निर्हरणत्वं च तस्येवान्यस्य नेक्षितम् ॥
- (f) राजा दुर्योधन इव स्ववंशच्छेदमिच्छता ।  
सोऽभूज्जातकयोगेन कारितः स्वकुलक्षयम् ॥

4. Write notes on any four of the following :—

20

- (a) Kaśhina's estimate of his countrymen.  
(b) Mihirakula  
(c) Mātṛgupta.  
(d) Chippitā Javāpīda Bṛhaspati.  
(e) Gaḡachakra  
(f) Shābharera  
(g) Dāivā hī-ara.

## SECOND HALF

Examiner—DR AMARESWAR THAKUR, M.A., PH.D.

Translate into English either (a) or (b) :—

30

(a) अथ कृतस्नानादिसकलकृत्यो जलनिधिजलमवतरितुमारेभे शरीरत्यागाय । अथ सानुग्राहेषु ग्राहेषु निर्मत्सरेषु मत्स्येषु अनिच्छेषु कच्छपेषु अक्रूरेषु नक्रेषु अभयङ्करेषु मकरेषु अमारेषु शिशुमारेषु आकाशात् सरस्वती समुदचरत् — ‘आर्यं कन्दर्पकेनो पुनरपि तव प्रियया सङ्गतिर्भविष्य-  
त्यचिरेण । तद्विरम मरणव्यवसायात्’ इति । सोऽपि तदुपश्रुत्य मरणारम्भाद् विरराम । ततः प्रियसमागमाशया शरीरस्थितिहेतुमशनं चिकीर्षुः कच्छोपान्तवनं जगाम । अथ तत इतः परिभ्रमन् फलमूलादिना वने वत्त यन् कालमनेकं निनाय । एकदा तु कतिपयमासापगमे सायन्तन-  
समय इव नर्त्तितनीलकण्ठः, तपस्वीव प्रशमितरजःप्रसरः, तापस इव धृतजलदकरकः, प्रलयकाल इव दर्शितानेकतरणिविभ्रमः, रेवतीकरपल्लव इव हलिधृतिकरः, लङ्केश्वर इव समेधनादः, विन्ध्य इव घनश्यामः समाजगाम वर्षासमयः ।

(b) अथ विष्णोत्फुल्ललोचनाः सर्वं एवावनितलनिवेशितशिरसः प्रणम्य चन्द्रापीडचरणौ रविताञ्जलयश्च जानुद्वयेनावनौ स्थित्वा कादम्बरीं व्यजिज्ञपत्—देवि, त्वत्प्रभावोऽयं यदेवमस्मानपुण्यवतः परित्यज्य दूरं

गतस्यापि देवस्य तयैवेदं प्रसन्नप्रभम् इन्दुमण्डलद्युतिहारि वीक्ष्यते वदनम्,  
तयैव चेदं चरणम् अविकारि पुरेव प्रोत्फुल्लतामरसञ्छायम् । तयैव च पुनः  
प्रसादानुभवप्रत्याशालालसं हृदयम् । अन्यच्च एतन्मनुष्येषु केन कदा इष्टं  
श्रुतम् अनुभूतं वा यदस्माभिः पुण्यवद्भिः । इत्यभिहितवति राजलोके  
ससखीजना सपरिवारा चोत्थाय स्वयमेवोच्चित्य देवताच्च नकुसुमानि स्नात्वा  
निर्व्वर्त्तितचन्द्रापीडशरीरपूजासंस्कारा शरीरस्थितिकरणायादिदेश राज-  
लोकम् । निर्व्वर्त्तितस्नानाशने च तस्मिन् राजलोके आत्मनापि  
महाश्वेतयोपनीतानि तयैव सह सपरिवारा फलान्युपयुक्तवती कृताहारा च  
तयैव चन्द्रापीडचरणौ अङ्गे कृत्वा उद्वहन्ती तमपि दिवसमनयत् ।

## SIXTH PAPER

Examiners—{ PROF. D. R. BHANDARKAR, M.A., PH.D.  
,, B. M. BARUAH, M.A., D.LITT.

*The figures in the margin indicate full marks*

*Only six questions are to be answered, of which Questions 1 and  
2 are compulsory*

1. (a) Ta aṇa Devānampiyasa Piyadasino rāṇo dhamma charapena  
bherighoso aho dhammaghoso [ : ] vimānadasanā cha hastidasanā cha  
avikkhamdhāni cha añāni cha divyāni rūpāni desayitvā janāy yārise bahūni  
vāsa satāni na bhūtapuve tārise aṇa vaḍḍhite Devānampiyasa dhammā-  
nussasiyā avārambho prāṇānaṃ avibhāsa bhūtānaṃ nātinaṃ sappaṭipati  
brahmana-samaṇānaṃ sappaṭipati mātari pitari sususā thaira-sususā esa  
aṇe cha bahuvāḍhe dhammacharaṇe vaḍḍhite vaḍḍhayisati ch'eva.

(b) Aḍḍhavaśābhāsitaśā Devānampiyasā Piyadashine lāṇe Kaligya  
vijitā [ . ] Diyaḍḍhasate pānasatasahaṣe yetaphā apavudḍhe satasahasamāte  
tata hata bahutāvumtake vā maṭe.

(c) Ayam dhammalipi Devānampiyena Piyadasinā rāṇā lekhāpitā [ : ]  
āsti eva sampkhitena asti majjhamaṇa asti vistateṇa [ . ] Na cha savaṇ  
savata ghaṭitaṃ mahālake hi vijite. Babu cha likhitaṃ likhāpayisaṃ  
ch'eva.

(d) Lajūkā me bahusu pānasata-sahasasu janasi āyatā. Tesam ye  
abhihāle vā dāṇḍe vā atapatiye me keṭe kiṃti Lajūkā asatha abhihā  
kaṇṇmāni pavateyū janasa jānapadasā hitasukkham upadahevu.

(e) Suvihitā pi niti iyaṃ [ : ] eka pulise pi athi ye bamdhanam vā  
palikilesam vā pāpunāt [ . ] Tata hoti akasmā teṇa bamdhanamputika amno  
cha bahu jame dāviye dukhīyati. Tata icchitaviye tuphehi kiṃti—maḥam  
paṭipādayemā ti [ . ].

(i) Transcribe the extract (b) or (e) in Aśoka Brāhmī or Kharoṣṭhī. 8

(ii) Rewrite the extract (a) in Sanskrit. 8

(iii) Translate any two of the above extracts into English, adding 12  
explanatory notes where necessary.



(iv) Interpret the extract (a), following the reading of the text as suggested above and pointing out how far and in what respects such an interpretation differs from the one offered by the previous scholars. 8

2. Write short explanatory and critical notes on any four of the following :— 16

(a) *Athi pi chā ekatiyā samājā sādhumatā.*

(b) *Sarvata vijitamhi evam api prachamtesu dve chikichihā katā.*

(c) *Ye vā pi amñe Aparāṃtā.*

(d) *Tenesā dhammayātū.*

(e) *Paṭvissīṭhaṃ paṭvissīṭhaṃ tesu tesu te te mahāmātā, dhammamahāmātā chu me etesu ch'eva viyāpaṭā sasesu cha amñesu pāsāṃdesu.*

(f) *Aṇi kichī dakkhāmi hakam tam ichāmi.*

(g) *Timni divasāni yote diṇne.*

(h) *Esā porāṇā pahitī,*

3. Ascertain the precise meaning of any four of the following terms used by Aśoka :— 12

*Nigoha, udupāna, mīga, majula, Pādesika, Saṃbodhi, sāravaḍḍhi, silā-vigadaand aṭṭakbhāgiye.*

4. Comment on the language of the Girnar copy or on that of the Kalsi copy of Aśoka's Fourteen Rock Edicts, discussing, in the former case, the affinity of the Girnar dialect to Pāli, and in the latter case, the reason why the Kalsi texts exhibit rather two dialects than one uniform dialect. 12

5. What are precisely the data of the personal history of Aśoka that may be gathered from his inscriptions and how far can these be shown to tally with the information contained in the Aśokan legends ? 12

6. State the main principles of Aśoka's *Dhamma*, discussing if any of them is inconsistent with the teachings of Buddhism. 12

7. Determine the extent of Aśoka's empire and influence with the aid of the data from his own records and their distribution. 12

8. State the claims made by King Aśoka and discuss how far these can be treated as legitimate or dismissed as unjustifiable hyperboles. 12

9. Write a short note on Aśoka's foreign policy and foreign missions. 12

10. A writer observes : 'As soon as the strong hand of the commander is withdrawn, disintegration overtakes the life of unity, and an authoritative royal ordinance is called forth to prevent disunion and dissension playing a great havoc.' 12

Discuss how far this remark may be shown to hold true of Buddhism in the light of Aśoka's Schism Pillar Edict (Sarnath, Allahabad, and Sanchi).

## SEVENTH PAPER

## FIRST HALF

Examiner—DR. NIRANJANPRASAD CHAKRABARTI, M.A., PH.D.

*The figures in the margin indicate full marks*

*Answer ANY FOUR questions, of which the FIRST must be one*

*Full marks—50*

1. Translate the following extracts into English with reference to the context and adding an explanatory and historical commentary :— 14

- (i) ये भुक्ता गुप्तनाथैर्न सकलवसुधाक्रान्तिदृष्टप्रतापै-  
 र्नाज्ञा दूगाधिपानां क्षितिपतिमुकुटाद्वयसिनी यान्प्रविष्टा ।  
 देशास्तान् धन्वशैलद्रुमगहनसरिद्वीरबाहूपगूढान् ।  
 वीर्यावस्कञ्जराज्ञःस्वगृहपरिसरावज्ञया यो भुनक्ति ॥
- (ii) यातेषु चतुर्षु कृतेषु शतेषु सौख्यै-  
 र्वाशीतसोत्तरपदेऽपिह वत्सरेषु ।  
 शुक्ले त्रयोदशदिने भुवि कार्त्तिकस्य  
 मासस्य सर्वजनचित्तसुखावहस्य ॥
- (iii) विचलितकुलक्षमीस्तम्भनायोद्यतेन  
 क्षितितलशयनीये येन नीता त्रियामा ।  
 समुदितबलकोषान् पुण्यमिश्रांश्च जित्वा  
 क्षितिपचरणपीठे स्थापितो वामपादः ॥

2. Write all that you know of Yasodharman and give the substance of the Mandasor Stone Inscription of the Mālava year 589. 12

3. What do you know of Chandra from the Meharauli Inscription? With whom would you identify this king, and why? Criticize the other views that may be known to you. 12

4. Name and identify as far as possible the kings who were taken prisoner and reinstated by Samudragupta. 12

5. Write all that you have read in inscriptions about Kumāragupta I, and show the extent of his empire on the light of the inscriptions so far discovered. 12

6. Write short notes on any six of the following :— 12

Antarvedi, Indrapura, Prathama kulika, Pustapāla, Tatparigraha, Kumāramātya Kulyavāpa, and Visalupadagiri.

## SECOND HALF

Examiner—DR. HEMCHANDRA RAY, M.A., PH.D.

Attempt ANY THREE

Full marks—50

1. Translate the following into English, adding historical and critical notes :—

(a) Bhojair = Matsyaḥ sa-Madraiḥ Kuru-Yadu-Yavan-Āvanti-Gandhāra-Kirair = bhupair = vyālola-mauli-praṇati-pariṇataiḥ sādhu saṅgīryamāṇaḥ | hr̥ṣyat-Pañcāla-vṛddh-oddhṛta-kanakamaya svābhīṣekoda-kumbho dattaḥ śrī-Kanyakubjas-sa-lalita calita-bhrulātā-lakṣmayena ||

(b) Aparimīta-vibhūti-sphīta sāmanta-senā-makūṭa maṇi-mayūkh-āk-rānta-pādāravindah | yudhi patita-gajendr ānika-bibhatsa-bhuto bhaya-vigalita-harṣo yena c-ākāri Harṣaḥ.

(c) Jitvā par-āśraya-kṛta-sphuṭa-nīca-bhāvam Cakrā-yudham vinaya-namra-vapur = vyarājat.

2. Write a note on the Varmans of Eastern Bengal. Support your statements by epigraphic evidence

3. Give a short account of the Gāhaḍavālas of Kanauj and Benares, with special reference to the Sarnath plate of Govindacandra

4. State what you know of the origin and history of the Hoysalas from epigraphic evidence.

5. Transcribe into Roman or Devanāgarī character the passage appearing on the attached plate. Determine its approximate age.

## EIGHTH PAPER

Examiner—DR. H. C. RAYCHAUDHURI, M.A., PH.D.

The figures in the margin indicate full marks

## FIRST HALF

Full marks—50

THREE questions to be attempted, including Question No. 7

1. What can be gathered from the *Rigveda* as to the geographical situation of the early Aryans in India? 15

2. Discuss the date of the geographical cantos of the *Mārkaṇḍeya Purāṇa*. 15

3. Write a critical note on the varying limits of the *Madhyadeśa* as described in Brāhmanical and Buddhist texts. 15

4. How far does the Purāṇic account of Jambudvīpa accord with reality? 15

5. Name the principal *janapadas* and cities included within the ancient Aparānta (in its wider sense). 15

6. Write notes on any five of the following :— 15

Kapisa, Lampāka, Udyāna, Uraśā, Tāmralipti, Kalinga, Drāviḍa, Malakuta, Srughna, and Kauśāmbī.

7. Comment on the following :—

20

- (a) अयन्तु नवमस्तेषां द्वीपः सागरसंबृतः ।  
योजनानां सहस्रं वै द्वीपोऽयं दक्षिणोत्तरात् ।  
पूर्वे किराता यस्यान्ते पश्चिमे यवनास्तथा ॥
- (b) एतत्तु भारतं वर्षं चतुःसंस्थानसंस्थितम् ।
- (c) प्राङ्मुखो भगवान् देवः कूर्मरूपी व्यवस्थितः ।  
आक्रम्य भारतं वर्षं नवभेदमिदं द्विजः ॥
- (d) पूर्णोत्कटो भद्रगौरस्तथोदयगिरिर्द्विजः ।

### SECOND HALF

Examiner—DR. V. S. SUKHTANKAR, M.A., PH.D.

Full Marks—50

Translate into idiomatic Sanskrit any two of the following passages :—

(a) We have thus examined, at what will not, I trust, be regarded as unreasonable length, some of the principal pieces of internal and external evidence touching the age of the Bhagavadgītā and its position in Sanskrit literature. Although, as stated at the very outset, the conclusions we have deduced in the course of that examination are not all such as will at once secure acceptance, I venture to think that we have now adequate grounds for saying that the various and independent lines of investigation which we have pursued converge to this point that the Gītā, on numerous and essential topics, ranges itself as a member of the Upanishad group, so to say, in Sanskrit literature. Its philosophy, its mode of treating the subject, its style, its language, its versification all point to that one conclusion

(b) He reviewed briefly the whole progress of his thoughts of the last two years, thoughts that had first been roused by the sight of his sick, dying brother. Then, for the first time, had he clearly comprehended that for every man, and for himself too, there was nothing ahead but suffering, death, eternal oblivion. He had decided that it was impossible to live thus, that it was necessary to explain life in a more sane way or else kill himself. But he had done neither the one nor the other; he had continued to live, think and feel. He even married during that time, experienced many joys, and was happy as long as he tried to shut his eyes to the meaning of life. What did it mean? It meant that he was living well and thinking badly.

(c) Man's progress from savagery to civilization is intimately bound up with the advance of abstract thinking, which enables him to rise above the chaos of particular sensations and to fashion therefrom an ordered cosmos. The growth of reasoning in its turn goes hand in hand with the development of language. The substratum of modern intellectual activities is very largely composed of those syntheses of audible and muscular sensations or images which represent words. These are not only means of communication, but also the vehicles of our abstract ideas. Words are the very stuff of thought. It follows then that a common language does imply a common mental outlook in its speakers; it not only reflects but also conditions ways of thinking peculiar to the users of the tongue in question.

## PALI

## FIRST PAPER

Examiner—MR. SAILENDRANATH MITRA M.A.

*The questions are of equal value*

## FIRST HALF

*Attempt THREE questions only, including Question 6*

1. (i) Into how many types would you classify the so-called 62 views enumerated in the *Brahmajāla-sutta*?

(ii) With what object in view did the Buddha deal with the problems?

(iii) Are the *Avyakatas* (indeterminable problems) included in these views?

2. (i) Explain fully the views of the *Diṭṭhadhammanibbānavādins* and the *Uddhamāghātanikas*.

(ii) Who were the *Pubbanta-kappikas* and the *Aparanta-kappikas*?

(iii) Have the doctrines of the six heretical teachers been included in the *Brahmajāla-sutta*? If so, under what head?

3. Describe, according to the stock exposition of the *śīlas* in the *Brahmajāla* and the *Sāmaññaphala Suttas*, the mode of ancient Indian life, as distinguished from the mode of life which the Buddha advocated.

4. (i) What information can be gathered from the *Ambaṭṭha* and the *Aśśulāyava Suttas* about 'class distinction' in ancient India?

(ii) Was Buddhism able to relax the rigour of the caste-laws?

(iii) Was there any 'caste-system' among the *Yona-Kambojas*?

5. (i) What are the marks by which a householder can be known as a Buddhist?

(ii) Was there at the time of the Buddha or during the century after him any Buddhist lay-society?

(iii) Can the *Sīgālovāda Suttanta* be rightly called the *Vinaya* of the householder? How far has it the Buddhistic stamp?

6. Translate into English *two* of the subjoined extracts including extract (c) :—

(a) Hoti kho so. bhikkhave samayo yaṃ kidaṃ karabaci dīghassa addhuno accayena avam loko vivatṭati. Vivatṭamāne loke sūñṇaṃ Brahma-vimānaṃ pātu-bhavati. Atha aññataro satto āyukkhayā vā puññakkhayā vā Abhassarekāyā cavitvā sūñṇaṃ Brahma-vimānaṃ upapaṭṭati. So tattha hoti nanomayo pīti-bhakkho sayam-pabho antalikkha-caro subhaṭṭhāyī, ciraṃ dīghaṃ addhānaṃ tiṭṭhāti.

(b) 'So abhijjham loke pahāya vizaṭṭābhijjehena cetasā vibarati. abhijjhāya cittaṃ parisodheti. Vyāpāda-padosaṃ pahāya avyāpanna-citto viharati, sabba-pāpa-bhūta-hitaṇṇakampī vyāpāda-padosā cittaṃ parisodheti. Thīna-middham pahāya vigata-thīna-middho viharati. āloka-saṇṇi sato sampañño thīna-middhā cittaṃ parisodheti. Uddhacca-kukkuccā pahāya anuddhato viharati, ajiḥva-taṃ vūpasanta-citto uddhacca-kukkuccā cittaṃ parisodheti. Vicikicchā pahāya tiṇṇa-vicikiccho viharati, akathaṃkaṭhi kusalesu dhammesu vicikicchāya cittaṃ parisodheti.'

(c) *Aññadattbu-haro mitto*  
           yo ca mitto vaci-paro |  
*Anuppiyañca yo āha,*  
           apāyesu ca yo sakbā |  
*Ete amitte cattāro,*  
           iti viññāya paṇḍito |  
*Ārakā parivajjeyya*  
           maggam paṭibhayam yathā ||  
*Upakāro ca yo mitto,*  
           yo ca mitto sukhe dukkhe |  
*Atth'akkhāyī ca yo mitto,*  
           yo ca mittānukampako |  
*Ete pi mitte cattāro*  
           iti viññāya paṇḍito |  
*Sakkaccaṃ payirupāseyya,*  
           mātā puttam vo orasam ||  
*Paṇḍito sīla-sampanno,*  
           saṃho ca paṭibhānavā |  
*Nivāta-vutti atthaddho,*  
           tādiso labhate yasam ||

## SECOND HALF

Attempt THREE question only, including Question 7

1. Bring out fully the underlying idea of the *Mūlapariyāya Sutta* and show that it forms the real foundation of the Buddha's teaching.

2. Annotate with full comments on the words italicised and with illustrations wherever possible :—

(a) *Ito pubbe avijjā nāhosi.*

(b) *Samādāya sikkhatha sikkhāpadesu.*

3. What evidence is there in the *Majjhima Nikāya* to show that the Buddha's religion was accepted by *gahatthas* and *pabbajitas* alike?

4. Show that the scheme of the *Paṭiccasamuppāda* had originally two termini—*avijjā* and *taṇhā*. Can you name the *Sutta* which offers a scheme of the *Paṭiccasamuppāda* with *āsava* as a stage further back from *avijjā*?

5. How many different types of poetical composition do you find in your *Samyutta* text? Comment on their importance for the history of Pāli literature.

6. "Pañcime bhikkhave yoṭhājīvupamā puggalā santo saṃvijjamānā bhikkhūsu". Explain fully.

7. Write, in your own Pāli, a brief commentary on the following :—

*Sākhāpattaphalupeto khandimā va mahādumo |*

*Mūlavā phalasampanno paṭiṭṭhā hoti pakkhinam ||*

*Manorame āyatane sevanti nam vihaṅgamā |*

*Chāvaṃ chāyatthukā yaṃti phalattham phalabhojino ||*

*Tath'eva sīlasampannam saddham purisapuggalam |*

*Nivātavurūṭṭam atthaddham sratam sakhalam muduram ||*

*Vitarāgā vitadosā vītanohā anāsavā |*

*Puññakkhetāni lokasmim sevanti tādisam naram ||*

*Te tassa dhammam desenti sabbadukkhāpanūdanam |*

*Yam so dhammam idhaññāya parinibbāti anāsavo ||*

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—M. GOKULDAS DE, M.A.*

*Attempt THREE questions only*

1. Discuss the date of the compilation of the Mahāvagga. What was the earliest form of the Vinaya rules? Show how the extant Mahāvagga rules developed out of it.

2. Give an account of the conversion of the Jāṭilas by the Buddha. How does it compare with the account of the conversion of the Pañcavaggiyas or the Bhaddavaggiyas?

3. (a) Translate the following extract into English:—

Danto dantehi saha purāṇa'atīlehi vippamutto vippamuttehi  
Siṅgīnikkhasuvanno Rā'agahaṃ pāvīsi Bhagavā  
mutto muttehi saha purāṇa'atīlehi vippamutto vippamuttehi  
Siṅgīnikkhasuvanno Rā'agahaṃ pāvīsi Bhagavā  
tiṇṇo tiṇṇehi saha purāṇa'atīlehi vippamutto vippamuttehi  
Siṅgīnikkhasuvanno Rā'agahaṃ pāvīsi Bhagavā  
Dasavāso dasabalo dasadhammavīdū dasabhi'e' upeto  
So dasasataparivāro Rā'agahaṃ pāvīsi Bhagavā ti.

(b) Write a short note on the historical importance of these verses.

4. Relate the circumstances which led to the promulgation of any three of the following rules:—

- Anu'ānāmi bhikkhave āraṃsa'ni.
- na bhikkhave jānaṃ āvāsati vāso puggalo upasampādetabbo.
- na bhikkhave anupajjhāyako upasampādetabbo.
- anujānāmi bhikkhave gilānena bhikkhuna chandaṃ dātum.
- na bhikkhave vassam upagantvā purimaṃ vā temāsapaṃ pacchimaṃ vā temāsapaṃ ava-itvā cārīkā paṭkamitabbā.

5. Write a note on 'Uposatha' and 'Vassavāsa' and discuss their importance from the point of view of the religious life of the Saṅgha.

## SECOND HALF

*Examiner—PANDIT VIDHUSEKHAR SASTRI*

*Attempt THREE questions only, question 5 being compulsory*

1. (i) Name the main divisions of the Vinaya Piṭaka, giving a short description of each of them.

(ii) In what relation does the *Suttavibhaṅga* stand to the *Pātimokkha*?

2. Write a note on the constitution of the Saṅgha in the early days of Buddhism.

3. Write short notes on the following:—

*bhikkhunī, sikkhamānā, sāmaṇerī, samaggo saṅgho, suqatavidatthi, param-parabhojanam, sapadānaṃ piṇḍapātaṃ bhuñjissāmi, sammukkhāvāso, kaṭṭhinam, aṅgulipatodakam.*

4. (i) Write why the *Saṅghāvasesa* offence is so called. What is its name in the *Prātimokkhasūtra* of the *Sarvāstivādi*?

(ii) (a) Explain *parivāsa*, *mānatta*, and *abbhāna*, and (b) write grammatical or philological notes on the following : *parivuttha*, *ciṇṇa*, *anabbhita*, *chāratta*, and *gārayha*.

(iii) Summarise the Saṅghādisesa rules and describe the mode of expiation for the offences to which they refer.

8. (a) Yo pana bhikkhu anabhiññasam uttarimanussadhammam.

(b) Yo pana bhikkhu bhikkhūnam sikkhāsā;vasamāpanno sikkham appaccakkhāya dubbalyam anāvikatvā.

(c) Yo pana bhikkhu dhammikāsam kammānam chandam datvā pacchā khīyanadhammam āpajjeyya pācittiyam.

(d) Yo pana bhikkhu orenadhammasam nabhēyeyya aññatra samayā pācittiyam.

(i) What are *uttarimanussadhammā* ? Name some of them.

(ii) Explain (b) and write how one can make *paraccakkhāna* of *sikkhā*, and *āvikamma* of *dubbalya*.

(iii) Write the meaning of (c). What are the *dhammika kamma* ?

(iv) What is the meaning of (d) ? What is the right time (*aññatra samayā*) referred to in the sentence ?

(v) What is *sikkhāsājīva* in (b) ?

### THIRD PAPER

#### FIRST HALF

Examiners—{DR. AMARESWAR THAKUR, M.A., PH.D.  
MR. SAILENDRANATH MITRA, M.A.

The figures in the margin indicate full marks

#### GROUP A

Answer Q. 1 and ONE of the other two questions

1. (a) Turn into Prakrit :—

8

(i) नहि सन्निहितानि पुनः लिखनसाधनानि ।

(ii) अहम् आर्यचारदत्तेन भविता ।

(iii) अहो रमणीयता अयं दिवसस्य ।

(iv) ननु सटजसन्निहिता ब्रह्मलला ।

(b) Render the following into Pali and Prakrit, noting some of the phonetic peculiarities in both the cases :— 4

अपुत्रकं गृहं गृहं देवः गृहः अप्राजकः ।

अप्राजस्य मुखं गृहं सर्वगृहं दारिद्र्यकम् ॥

(c) Illustrate the changes of *ai*, *u*, *t*, and *bh* in Prakrit. 4

(d) Give Pali examples of the change of *y* into *h*, *v* into *p*, *r* into *l*, and *d* into *y*. 4





## SECOND HALF

Examiner—PROF. SUNITIKUMAR CHATTERJEE, M.A., D.LITT.

## PĀLI PHILOLOGY: 40 marks

The questions are of equal value

Select THREE questions only

1. Discuss the origin of Pāli, and indicate its connexion with the Prakṛits of Aśoka, of the Sanskrit Drama, and of the Jaina canon.

2. Answer two of the following :—

(a) Explain the terms *tadbhava*, *tatsama*, and *semi-tatsama* with reference to the vocabulary of Pāli, adducing examples.

(b) Write a note on spontaneous nasalisation in Pāli.

(c) Explain the behaviour of the Old Indo-Aryan (Vedic or Sanskrit) dentals in connexion with *r* in their development in Pāli.

3. (a) Discuss the nature of the vocalic *r̥* sound in Old Indo-Aryan, and indicate its history in Pāli.

Or,

(b) Write a note on either vowel sandhi in Pāli or consonantal assimilation in Pāli.

4. Write a historical note on the inflexions of the Pāli nouns in *-a*, commenting on the various irregular or analogical forms.

5. State the situation in Pāli regarding the subjunctive and the optative moods, and discuss the origin of the Pāli infinitive and gerundial forms.

6. Write philological notes on eight of the following Pāli words :—

*dīgha*, *ettha*, *gheppati*, *Kaccāna*, *acchera*, *Kusīnāra*, *utṛaja*, *chakala*, *Āḷavī*, *laṭṭhikā*, *daha*, *paggharati*, *kāhasi*, *tumhe*, *tissā*, *asuka*, *pannarasa*, *aḍḍhuddha*, *vuccati*, *icchita*.

## FOURTH PAPER

Examiner—DR. NALINAKSHA DATTA M.A., PH.D., D.LITT.

The questions are of equal value

Answer six questions only

1. (a) Draw a map of Northern India, showing the places visited by the Buddha according to the Pāli tradition.

(b) Name the most important centres of Buddhism in Southern India, and show how Buddhism was propagated there.

2. Give an account of the inscriptional finds which throw light on the age of the Pāli canon.

3. (a) Give a short account of the growth of the Buddhist order.

(b) Do you know of any monastic system prevalent in India before the appearance of Buddhism?

4. Mention the most notable events in the history of Buddhism between the reigns of Aśoka and Kaniṣka.

5. Write an exhaustive note on the *Prātimokṣa Sūttas* so far discovered.
6. Explain *Pudgalā-sūnyatā* and *Dharma-sūnyatā*, and show that they form the cardinal principles of Hinayāna and Mahāyāna respectively.
7. Write notes on *any three* of the following :—
  - (a) *Avadāna* and *Jātaka*.
  - (b) *Mahāvaiṣṇava-sūtras*.
  - (c) The aims and objects of the two works *Kathāvatthu* and *Milindapañha*.
  - (d) The *Abhidharma Piṭaka* of the Theravādins and the *Sarvāstivādins*.
  - (e) The works constituting the sources of the life of the Buddha.
8. Explain fully the doctrines of the *Mahāsaṅghikas* and the *Sarvāstivādins*, and show how they differ from those of the Theravādins.
9. (a) When and how was Buddhism introduced into China and Tibet ?  
 (b) Were Buddhists persecuted in India ? If so, by whom and when ?
10. Estimate the importance of the records left by the Chinese travellers as a repository of materials for the history of Buddhism.
11. Write a short dissertation on Buddhism as a religion.

## (GROUP A)

## FIFTH PAPER

Examiner—PROF. B. M. BARUAH, M.A., D.LITT.

*The figures in the margin indicate full marks*

*Attempt Questions 4 and 5, and FOUR from the remaining questions*

1. 'The Book of Birth-stories is the oldest, most complete, and most important collection of folk-lore extant.' Justify this statement 15
2. 'The scriptural authority of the Barhut carvings was a Jātaka-selection including many legends all of which cannot be traced in the Pāli or any other particular tradition.' Discuss. 15
3. What are the features that distinguish the Jātaka book from other story books ?
4. Explain in Pāli *any two* of the following :— 20
  - (a) Saññoḥasambhogaviśesadassanaṃ  
 anariyadhammesu sañhesu nassati,  
 kaṭaṇi ca ariyesu ca uññāyesu ca  
 mahapphalaṃ hoti aṇuṃ pi tādisu.
  - (b) Panujja dukkheṇ sukhaṃ janinda  
 sukhena vā dukkham asayha-āhi  
 ubhayattha sattā abhinibbutatā  
 sukhe ca dukkhe ca bhavanti tulyā.
  - (c) Divā ca ratti ca mayā upaṭṭhitā  
 tapassinā jotiriva vane vasaṃ,  
 sā dhammaṃ okkamma adhammaṃ ācari,  
 akiriyaṃ paṇadāhi saṇḥavo.

5. Translate into English *any three* of the following with reference to the context, adding notes where necessary :— 20

- (a) Yo tvaṃ evaṃgate oghe appameyye mahappave  
dhammavāyāmasampanno kammanā nāvasidati  
so tvaṃ taṭṭh'eva gacchāhi yattha te nirato mano ti.
- (b) Anekarūpaṃ ruciraṃ nānācitaraṃ pakāsati  
ākippaṃ lūdasadisehi vyaṅgeh'eva surakkhitaṃ,  
pavis'etena rājisi, arajam bhūmiṃ akkamā ti.
- (c) Sace hi so sujjhati yo haṇṇti  
hato pi so saggam upeti tñānaṃ  
bhovādi bhovādina mārayeyyuraṃ  
ye cāpi tesaṃ abhisaddaheyyuraṃ
- (d) Amāyadāsāpi bhavanti h'eke,  
dhanena kūtāpi bhavanti dāsā,  
sayam pi h'eke upayanti dāsā,  
bhayā paṇṇuṇāpi bhavanti dāsā.
- (e) Uṭṭhehi katte taramāno, brāhmaṇassa avākara,  
dāsasataṃ dāsasataṃ gavam batthūsabhaṃ sataṃ  
jātarūpasabhassā ca puttānaṃ dehi nikkayaṃ ti.

6. What are the Suttanta-Jātakas and how many of them can yet be traced in the Pali canonical texts ? Show how these can be treated as the earliest forms in which we find the Jātakas. 15

7. What are the component parts of a Commentary-Jātaka ? How is it that all the parts are not to be found in all the Jātakas as they come down to us ? 15

8. What part is played by the Bodhisatta in the Suttanta and Commentary-Jātakas ? Can you conceive of a Jātaka without connecting it with a previous birth of a Buddha ? 15

9. How can you distinguish a Jātaka, a Commentary-Jātaka from an ordinary folk-tale ? Cite instances to illustrate your answer. 15

10. Wherein lies the historical and literary importance of the Jātakas ? 15

11. Determine the relative chronology of the Books of Stories of Heaven and Hell. 15

12. Discuss the full bearing of the stories of Heaven and Hell on the character of popular Buddhism, substantiating your argument with citations, wherever possible, from your texts. 15

## SIXTH PAPER

### FIRST HALF

Examiner—PROF. B. M. BARUAH, M.A., D.LITT.

*The figures in the margin indicate full marks*

*Attempt Question 1, and two from the remaining questions*

1. Translate the following extract into English, adding short explanatory notes wherever necessary :— 20

(a) Kasmā pan'ettha avijjā ādito vuttā ? Kim pakativādinam pakati viya avijjā pi akāraṇaṃ mūlākāraṇaṃ lokassā'ti ? Na akāraṇaṃ, āsavasaṃudayaṃ avijjā-saṃudayo'ti hi avijjāya kāraṇaṃ vuttaṃ. Atthi pana pariyāyo yena mūlākāraṇaṃ siyā. Ko pan'eso ti ? Vajjakathāya

sīsabbhāvo bhagavā hi vaṭṭakathaṃ kathento dve dhamme sīsaṃ katvā katheti, avijjāṃ vā, yathāha :

'Purimā bhikkhave koṭi na paññāyati avijjāya, ito pubbe avijjā nāhosi atha pacchā samabbhavīti evaṃ ca na bhikkhave vuccati, atha ca pana paññāyati idappaccayā avijjā ti.'

2. Solve *one* of the following riddles, commenting on the cogency of the arguments put forward in the Milindapañha :— 15

(a) Yadi bhante Nāgasena bhagavatā bhaṇitaṃ : Tathāgatassa na evaṃ hoti—ahaṃ bhikkhusaṅghaṃ pariharāmi vā, mam'-uddesiko bhikkhusaṅgho'ti vā ti, tena hi : 'anekasataṃ bhikkhusaṅghaṃ pariharāmi'ti yaṃ vacanaṃ taṃ micchā.

(b) Yadi bhagavatā bhaṇitaṃ : Arahā sabbabhaiyaṃ atikkanto'ti tena hi : 'Sabbe tasanti daṇḍassa, sabbe bhāyanti maccuno'ti yaṃ vacanaṃ taṃ micchā.

3. Write explanatory and critical notes on *any two* of the following :— 15

(a) Nāma-rūpaṃ paṇ'ubhayaṃ—  
hoti yaṃ yassa paccayo !  
Yathā ca taṃ pi sabbattha—  
viññātabbaṃ vibhāvinaṃ ||

(b) Yathā hi sūgasambhārā  
bhoti saddo 'ratho' iti !  
evaṃ khandhesu santesu  
bhoti 'satto' ti sammuti ||

(c) Na bhikkhave attānaṃ pātetaṃ.

(d) N'atthi Ānanda Tathāgatassa dhamme ācariyaṃuṭṭhi.

4. What is the special significance of the term 'mendakapañha' employed as the title of a division of the Milindapañha? And what purpose has it served with regard to the interpretation of Buddhism? 15

5. Discuss the importance and value of the Visuddhimagga as a general commentary on Buddhism. 15

6. A writer maintains that 'the Visuddhimagga is nothing in fact but an elaboration and elucidation of the points suggested in Upatissa's questions in the Rathavināsa-Sutta.' 15

Justify or refute this remark.

## SECOND HALF

Examiner—MR. SAILENDRANATH MITRA, M.A.

Full marks—50

The questions are of equal value

Attempt Question 1, and ONE from each of Groups A and B

1. Explain with reference to the context *any four* of the following extracts, fully commenting upon the italicised words or expressions and tracing, wherever possible, the theme of the passages to other contexts, prose or verse :—

(a) Channaṃ ativassati, vivaṇṇaṃ nātivassati : |  
tasmaṃ channaṃ vivaretha, evaṃ taṃ nātivassati ||

Amoghaṃ divasaṃ kayirā appena bahukena vā |  
yaṃ yaṃ vijahate rattiṃ tadūnaṃ tassa jīvitam ||

- (b) *Ye etā upasevanti rattacittā puthujjanā |  
vaḍḍhenti kaṭṭasim ghoram ācinanti punabbhavam |*  
.....  
*Kamesu ādinavam disvā nekkhammam daḥhukhemato |  
nissaṭṭo sabbakāmehi, patto me āsavakkhaya |*
- (c) *Uḥho mātā ca dhītā ca mayam āsum sapattiyo |  
tassā me ahu samvego abbhuto lomahomsano |  
Dhiratthu kāmā asuci duggandhā bahukaṇṭakā |  
Yattha mātā ca dhītā ca sambhariyā mayam ahuṃ |*
- (d) *Aggim candaṃ ca sūriyaṃ devatā ca namassi 'haṃ |  
naddittbhāni gantvāna udakam oruhāmi 'haṃ |  
Bahuvatasamāḍḍhā aḍḍham sisassa olikkhiṃ |  
chamāya seyyam kappemi rattibhattam ra bhūñji 'haṃ |*
- (e) *Evam dhamme viyāpanne vibhinṇā suddavessikā |  
puthu vibhinṇā khattiyā patim bhariyā avamaññitha |  
Khattiyā brahmapandhū ca ye o'āñhe gottarakkhitā |  
jātivādam niraṇkatvā kāmānam vasamāgamuṃ |*
- (f) *Asamā uḥho dūravahāravuttino, gihi dāraposī amamo ca snbbato |  
parapāṇarodhāya gihi āsaññato, niccam muni rakkhati pāṇino yato |  
Sikkhī yathā viḷagivo vihaṇḍamo hatpeassa nepeti javam kudācanam |  
evam gihi nānukaroti bhikkhuno munino vivittassa vanamhi jhāyato |*

## GROUP A

2. 'As is very probably the case also with regard to the Jātakas, the Udānas, etc., the Theragāthā book, besides verses repeated from other works, consists, to a very great extent, of materials entirely its own, and highly significant for the understanding both of the religious theories and of the religious feeling prevalent among the ancient Buddhist Order.' Discuss this remark of Oldenberg with suitable illustrations from your text.

3. 'Apart from their interest as a contribution to the history of women under Monasticism, the most salient object-lesson given by East to West in these Psalms is just this characteristic perspective taken of what we call "life".' Amplify this testimony of Mrs. Rhys Davids on the Therīgāthā.

## GROUP B

4. What information can be gathered from the Sutta-nipāta about Samanas and Brāhmanas, 'the two large and distinguished religious sects at the time of Buddha'? What was Buddha's attitude towards them, their systems, and their following?

5. 'In the contents of the Sutta-nipāta we have an important contribution to the right understanding of Primitive Buddhism.' Justify this statement of Fausbøll with illustrations from your text.

## SEVENTH PAPER

## FIRST HALF

Examiners—{MR. GOKULDAS DE, M.A.  
PROF. B. M. BARUAH, M.A., D.LITT.

*The figures in the margin indicate full marks*

*Attempt Question 1, and two from the remaining questions*

1. Transcribe in Brāhmī and translate into English *any four* of the 20 following, adding short explanatory notes where necessary :—

(a) Bhadatasa Aya-Ispālitasa navakamikassa dānam.

- (b) Dhanabhūṭissa rāṣaṇo putassa k(u)māressa Vādhapālassa dānaṃ.  
 (c) Mahāsāmāyikāya Arāhaguto devaputo vokatō bhagavato sāsani paṭisaṃdhi.  
 (d) Jetavana Anādhapēḍiko deti koṭṭisaṃbhatena keto.  
 (e) Tirami timigala-kumha Vasuguto mācito mahādevānaṃ.  
 (f) Vedisahehi dantakārehi rūpakamma kataṃ.  
 (g) Rāṇo Siri-Sātakaṇisa āvesaṇisa Vāsīṭhīputassa Ānappassa dānaṃ.

2. Write explanatory and critical notes on any three of the following :— 15

(a) *Bhagavato ūkramti*; (b) *Bhagavato cūḍamahō*; (c) *Bhagavato Sākamunino Bodho*; (d) *Ajātasala Bhagavato vāṇdate*; (e) *Bhagavato dhammacakkaṃ : Rājā Pasenadi Kosalo*

3. Ascertain on palaeographic evidence the relative chronological position of the Barhut and Sanchi inscriptions. 15

4. Is the term 'Jātaka-labels', as applied also to the sculptures, illustrating scenes from the present life of the Buddha justifiable? If so, how? Is there any definite literary background of the Barhut sculptures and the inscriptions labelling them? 15

5. Do you notice any variation in narration between the Jātakas in Barhut stoue and those in the Jātaka-commentary? Discuss this question especially with reference to the Barhut scenes labelled by the inscriptions (1) *Vitura-Punakiya Jātakaṃ*, and (2) *Yavamajjhakyaṃ Jātakaṃ*. 15

6. What information can be gathered from the Barhut and Sanchi inscriptions regarding the social position and other particulars of their authors—the donors of the Stūpa-railings and gateways? 15

## SECOND HALF

Examiner—DR. M. P. CHAKRABARTI, M.A., PH.D.

*The figures in the margin indicate full marks*

*Attempt THREE questions only, including Question 1*

1. Translate four of the following extracts into English, adding critical and explanatory notes where necessary :— 20

(a) Pulisā pi cha me ukasā chā gevasā chā maḥimā chā anuvidhiyamīti saṃpaṭipādayamīti chā alaṃ chapaḥaṃ samādapayitave hemevā sūta-mahāmātā pi esa hi vidhi yā iyaṃ dhammena pāṇaṃ dhammena vidhāne dhammena sukhyaṇā dhammena goti ti.

(b) Dhamme saddhū kiyamāṇaṃ chu dhamme ti apāsinaṃ bahu kayāne dayā dāne sache saccaye chakku-dāne pi me bahuviddhe diṃṇe dupadachatapadesu pakki-vālichelesu vividhe me anugāhe kaṭe ā pāna-dākināye.

(c) Sarvata vijitamhi Devānaṃpriyasa Piyaḍasino rāṇo evamapi prachantaṃ yathā Chodā Pāḍa Satiyaṃ Ketalaṃputo ā Tāmbapaṃṇi Aṃtiyako yona rāṇa ye vā pi tassa Aṃtiyakassa sāmipam rāṇo sarvatra Devānaṃpriyasa Piyaḍasino rāṇo dve chikichhā katā manusa-chikichhā cha pasu-chikichhā cha.

(d) Bahakā cha etāya athā vyāpatā dhamma-mahāmātā cha ithi-jhaka-mahāmātā cha vacha-bhūmika cha aṇe cha nikāyā ayaṃ cha etassa phala ya ātpa-pāsaṃḍa-vaḍḍhi cha hoti dhammasa cha dīpanā.

(e) Evameva hida raja-vishavaspi Yona-Kaṃboyesu Nabhaka-Nabhitina Bhoja-Pitṭikeshu Aṃdhra-Palidesu savatra Devānaṃpriyasa dharmadassati anuvajitamhi.

(f) *Imāni bhaṁṣite dhamma-paliyāyāni Vinayasamukase Aliya-vasāpi Anāgata-bhayāni Muni-gāthā Moneya-rute Upatissa-pasine e cha Lāghulovāde musa-vādaṁ adhigichya bhagavatā Budhena bhāṣite.*

2. State what you know of the family of Aśoka from the Brāhmaṇa and Buddhist sources and examine how far the names agree with those mentioned in his edicts. 15
3. Give a review of the measures taken by Aśoka for the propagation of his *dhamma* till the twenty-seventh year of his consecration. 15
4. Discuss the principal dialectic characteristics of the Pillar Edicts, pointing out their agreement with or difference from Pali. 15
5. Can you prove the existence of the cult of the previous Buddhas in the time of Aśoka, and, if so, what was the latter's attitude towards it? Wh. were the Ājivikas and what was the position enjoyed by them in the time of Aśoka? 15

## EIGHTH PAPER

## FIRST HALF

*Examiner*—MR. SAILENDRANATH MITRA, M.A.

## (ESSAY)

*Full marks*—50

1. Write an essay on one of the following subjects :—
  - (a) The *Bodhiśattva* conception—its growth and development.
  - (b) Nirvāṇa in Pāli literature—its root idea and variations.
  - (c) Vinaya tracts in the Suttapiṭaka—from their original to their final shape.
  - (d) Authenticity of the Pāli canon as embodying the teachings of the Buddha.

## SECOND HALF

*Examiner*—MR. GOKULDAS DE

*The figure in the margin indicate full marks*

## (UNSEEN)

1. Translate into English *any two* of the following passages :— 50
  - (a) Tena kho pana samayena rañño Pasenadi-Kosalassa Seto nāma nāgo mahātnriyatālitavāditeṇa pubba koṭṭhakā paccuttarati 'Api' ssa taṃ jano disvā evaṃ āha 'abhirūpo vata bho rañño nāgo, dassaniyo vata bho rañño nāgo, pasādiko vata bho rañño nāgo kāyupapanno vata bho rañño nāgo, nāgo vata bho nāgo 'ti Evaṃ vutte āyasmā Udāyi Bhagavantaṃ etad avoca hatthim eva nu kho bhante mahantaṃ brahantaṃ kāyupapannaṃ jano disvā evaṃ āha : nāgo vata bho nāgo ti udāhu assiam pi keñci mahantaṃ brahantaṃ kāyupapannaṃ jano disvā evaṃ āha 'nāgo vata bho nāgo' ti? 'Hatthim pi kho Udāyi mahantaṃ brahantaṃ kāyupapannaṃ jano disvā evaṃ āha 'nāgo vata bho nāgo ti.



- (b) *Manussebbhūtaṃ sambuddhaṃ attadantaṃ samāhitaṃ iriyamānaṃ brahmapathe cittassupasame rataṃ yaṃ manussā namassanti sabbadhammānapāraguṇṇaṃ devā pi naṃ namassanti : iti me arahato suttaṃ sabbasaññājanātitaṃ vanā nibbānaṃ āgataṃ kāmehi nekkhammarataṃ muttāṃ sēlā va kañcanaṃ sabbe accaruci nāgo Himavā ñhe siluccayē Sabbesaṇi nāganāwānaṃ saccaṇāmo anuttaro.*

(c) *Atīte Brahmadat'e Bārāṇasīyaṃ raḍḍhaṃ karente ekassa amaccassa paccantaḡāmaṃ udāsi, subbaṃ purimasaḡāsaṃ eva. Tadā pana Bolhisatto vaniḡāya paccante vicaranto tasmim gāmaṃ nivāsaṃ kappesi. So tasmim gāmaḡhoḡake sāyaṇhasamaye mahāḡanaparivārena bheriyā vajjamānāya āgacchante "ayaṃ duḡḡhabhoḡako corehi ekato hutvā gāmaṃ vilumpāpetvā coresu palāyitva aḡavim pavitḡḡhesu idāni upasantūpasanto viḡa bheriyā vajjanānāya āgacchaḡi" ti imaṃ gāḡhaṃ āha :*

*Yato viluttā ca hatā ca gāvo  
daḡḡbhāni gehāni jano ca rūto  
athāgamaḡ puttahatāya putto  
kharassaraṃ deḡḡmaṃ vādayanto ti.*

## GROUP B

### FIFTH PAPER

*Examiner—PROF. B. M. BARUAH, M.A., D.LITT.*

*The figures in the margin indicate full marks*

*Only six questions are to be attempted, of which*

*Question 1 is compulsory*

*Candidates are expected in answering questions to show,  
as far as possible, their acquaintance with the texts*

1. Translate any two of the following extracts, adding notes where necessary :— 30

(a) *Tasmim kho pana samaye dhammā honti, khandhā honti, āyatanāni honti, dhātuyo honti, āhārā honti, indriyāni honti, jhānaṃ hoti, maggo hoti, balāni honti, betū honti, phasso hoti, vedanā hoti, saññā hoti, cetanā hoti, cittaṃ hoti. vedanākkhandho hoti, saññākkhandho hoti, saṅkhārakkhandho hoti, viññāṇakkhandho hoti, manāyatanaṃ hoti, manindriyaṃ hoti, manoviññāḡadhātu hoti, dhammāyatanaṃ hoti, dhamuadhātu hoti, ye vā pana tasmim samaye aññepi atthi paticcasamuppannā arūpiṇo dhammā—ime dhammā kusalā.*

(b) *Yasmim samaye lokuttaraṃ jhānaṃ bhāveti, niyyānikaṃ apaccayaḡāmiṃ diḡḡhigatānaṃ pahānāya paḡḡamaḡya bhummīyāpattiyā vicceva kāmehi . . . pe . . . paḡḡamaṃ jhānaṃ upasampajja viharati dukkhāpaḡipadaṃ dandābhiniḡḡaṃ-tasmim samaye phasso hoti . . . pe . . . avikkhepo hoti . . . pe . . . ime dhammā kusalā : tassa'eva lokuttarassa kusalaḡa iḡḡḡassa katattā bhāvitattā vipākaṃ vicceva kāmehi . . . pe . . . paḡḡamaṃ jhānaṃ upasampajja viharati dukkhāpaḡipadaṃ dandābhiniḡḡaṃ suḡḡḡataṃ-tasmim samaye phasso hoti . . . pe . . . aḡḡḡindriyaṃ hoti . . . avikkhepo hoti . . . pe . . . ime dhammā avyākatā*

(c) Yathā hi sakupo ākāseṇa āgantvā rukkhagge nīliyamāno va rukkhasākhāṃ ghaṭṭeti chāyā c'assa paṭhavīyaṃ paṭihanāti sākā-ghaṭṭanachajāpharaṇāni apubbaṃ acarimaṃ ekakkhaṇe yeva bhavanti evaṃ paccuppannarūpādīhi cakkhuppasādadighaṭṭanaṃ ca bhavaṇḍa-cālīnasamatthāya manodvāre āpātlagamaṇaṃ ca apubbaṃ acariṃsaṃ ekakkhaṇe yeva hoti. Tato bhavaṇḍaṃ vicchinditvā cakkhuvārādhū uppannānaṃ āvajjauddīnaṃ veṭṭhapana-pariyosānaṃ anantarā tesāṃ ārammaṇānaṃ aññatarasmiṃ idam mahācittaṃ uppajjati suddhamano-dvāre pana pasādaghaṭṭapa kiccaṃ natthi.

2. Write explanatory and critical notes on any four of the following terms:— 14

Citta, kamma, saddhā, viriya, sati, samādhi, and paññā.

3. Compare and contrast the Dhammasaṅgani and the Vibhaṅga as Abhidhamma manuals, bringing out the special importance of each. 14

4. 'The Dhātukathā has no separate existence and importance apart from the Dhammasaṅgani.' Refute or justify this remark. 14

5. Discuss the chronology of the seven Abhidhamma treatises, determining the place that may be assigned to the Dhammasaṅgani, the Vibhaṅga, and the Dhātukathā. 14

6. Is the Abhidhamma Piṭaka more metaphysical in its contents than the Sutta? Answer this question stating your reasons. 14

7. Discuss the possibility of psychology as a science in the light of Buddhaghosa's opinion on the subject. 14

8. Can there be a proper study of the mind apart from a discussion of the standards of human conduct? Clearly state the Buddhist view-point with reference to this problem. 14

9. Can you reasonably treat the Atthasālini as one of the earliest works of Buddhaghosa? Give reasons for your answer. 14

10. What is the Buddhist notion of 'cause'? How does Buddhaghosa attempt to establish that Buddhism takes up in this regard a position which is identical neither with monism nor with pluralism, but at the same time accords significance to both? Discuss this question in the light of the following extracts from the Atthasālini:— 14

Yā hi eṣā sādharma-phala-nipphādakattena saṅghitā paccayānaṃ sāmaggī sā idha samavāyo ti nātabbā.

Eten hi samavāyasāṅkhāto samayo anekahetuto vuttimā dipeti tena ekakāraṇavādo paṭisedhito hoti. Samavāyo ca nāma sādharma-phala-nipphādane aññamaññāpekkho hoti. Tasmā eko kattā nāma natthīti imam pi atthaṃ dipeti.

Fabhāvena hi kārake asati kāraṇantarāpekkhā ayutā ti. Evam ekassa kaṣaci kuraḥsa alhāvadipavēna sayāṅkatāṃ sukhaṃ dukkhaṃ ti adi paṭisedhitam hoti.

## SIXTH PAPER

Examiner—PROF. B. M. BARUAH, M.A., D.LITT.

*The questions are of equal value*

*Only six questions are to be answered including Question 1*

1. Translate the following extract into English, indicating its bearing on the purpose of the exegetical methodology in the *Netti*:—

Tattha yo ca parato ghoso yo ca ajjhataṃ yoniso manasikāro—ime dve paccayā. Parato ghosena yā uppajjati paññā—ayam vuccati sutamayi paññā, yā ajjhataṃ yoniso manasikārena uppajjati paññā—ayam vuccati cintāmayi paññā'ti imā dve paññā veditabbā. Purimakā ca dve paññā ime dve hetū dve paccayā sāvakaassa sammādiṭṭhiyā uppādāyā. Tattha parato ghosassa saccānussandhiassa desitassa atthaṃ avajānanto atthapaṭisaṃvedī bhavissatīti n'etaṃ ṭhānaṃ vijjati, na ca atthapaṭisaṃvedī yoniso manasikarissatīti n'etaṃ ṭhānaṃ vijjati. Parato ghosassa saccānussandhiassa disitassa atthapaṭisaṃvedī bhavissatīti ṭhānaṃ etaṃ vijjati. Atthapaṭisaṃvedī ca yoniso manasikarissatīti ṭhānaṃ etaṃ vijjati. Esa hetu, etaṃ ārammaṇaṃ, eso upāyo āvakassa n'yyānassa, matthañño. Tasmā nibbāyitukāmena sutamayena atthā pariyesiṭabbā.

2. Expand the ideas contained in the following passage:—

Paṭiccasamuppāda-nayo Paṭṭhāna-nayo ceti paccayasāṅgaho veditabbo Tattha tabbābhāvābhāvībhāvākāramatto palakkhito Paṭiccasamuppāda-nayo.

Paṭṭhāna-nayo pana āhacca paccayaṭṭhitim ārabhha pavucessi. Ubhayam pana vomissitvā papañcanti ācariyā.

3. Write explanatory and critical notes on any three of the following, bringing out the historical importance of each:—

*Desanā-hāra, Vevacana-hāra, Parikkhāra-hāra, Lakkhaṇahāra, Pañcayanā, and Sāsana-piṭṭhāna.*

4. Discuss and criticise the *raison d'être* of the Buddhist classification of the types of 'consciousness' and 'mental properties'.

5. What is meant by the term *Paññatti*? Name and illustrate the different *Paññattis*. Show how far the Buddhist term *Paññatti* yields a philosophical idea which is neither nominalistic nor conceptualistic but at the same time does justice to both nominalism and conceptualism.

6. Show how far the Buddhist conceptions of *Avijjā* and *Nāma-rūpa* have been influenced by the Sāṅkhya conceptions of *mūlaprakṛiti* and *Puruṣa* and *Prakṛiti* respectively.

7. Examine the soundness of the Buddhist theories of Dream and Death and After.

8. Determine the relative chronology of the *Abhidhammāvatāra* and the *Visuddhimagga*.

9. Give a short account of the life of the author of the *Abhidhammāvatāra* or of that of the *Abhidhammatthasaṅgaha*, indicating the place that the particular author occupies in the history of Buddhist philosophy.

10. Account for the success and popularity of *Abhidhammatthasaṅgaha* as a compendium of *Abhidhamma*.

11. (a) What do you learn about the nature of *citta* and *cetasika* from the *Abhidhammatthasaṅgaha*?

(b) How does the *Abhidhammatthasaṅgaha* distinguish between *nāmakāya* and *rūpakāya*?

12. (a) How will you fix the date of *Nettipakarana*?

(b) 'Dhammapāla has called the *Netti* a commentary (*atthavaṇṇanā*) to the Holy Writings' Annotate.

## SEVENTH PAPER

Examiner—DR. NALINAKSHA DATTA, M.A., PH.D.

*The questions are of equal value*

*Answer six questions only, including Nos. 2 and 5*

1. Translate the following extracts into English, adding notes where necessary :—

(a) Nanu Arabhū vitarāge vītadoso uṭṭamoho katakaranīyo ohitabbhāro anuppattasaddattho parikkhīṇabhava-saññojano sammadañña vimutto ukkhitta-pa igbo sampkiṇṇaparikkho abbulbesiko niraggaḷo ariyo pannaddhajo pannabbhāro vi-saññutto suvitaviṇṇayo dukkhap tassa parinīḷatam, samudayo pahīno, nirodho sacchikato, muggo bhāvito, abhinīḷeyyam abhinīḷatam, parinīḷeyyam parinīḷatam, pabātabbam pahīnam, bhāvetabbam bhāvitam, sacchikātabbam sacchikatan'ti? Amantā.

(b) Suññato lokam avekkhassu  
Moghajāja sadā sato  
Attāsuuddiṭṭhiṃ ūhacca  
Evam maccutaro siyā.  
Evam lokam avekkhantam  
Maccurājā na passati

(c) Niggaho paravādissā, suddho paṭhamapaṇṇikā,  
Asuddho pana tasāva, paṭikammajāyo tahiṃ,  
Niggaho sakavādissā, asuddho dutiyapaṇṇikā,  
Visuddho pana tasāva, paṭikammajāyo tahiṃ.  
Tasmā dvisupi tñānesu, jāyo va sakavādīna,  
Dhammena hi jāyo nāma. adhammena kuto jāyo.

2. Comment on the following in Pālī :—

'Kinnu satto ti paccesi  
Māra diṭṭhigataṃ nu te  
Suddhasamphārapuñño yaṃ  
Nayidha sattūpalabbhati.  
Yathā pi aṅgasambhārā  
Hoti saddo ratho itī  
Evam khandhesu santesu  
Hoti satto ri sammuti.  
Dukkham eva hi sambhoti  
Dukkham tiṭṭhati veti ca  
Nāññatra dukkhā sambhoti  
Nāññam dukkhā nirujjhatitī.'

3. Explain fully according to your text :—

Khandhesu bhijjamānesu so ce bhijjati puggalo  
Ucchedā bhavati diṭṭhi yā Buddhena vivaṃjitā.  
Khandhesu bhijjamānesu no ce bhijjati puggalo  
Puggalo sassato hoti nibbāneva samasamo ti.

4. Elucidate four of the following terms :—

Ubbatobhāgavimutto, Paññāvimutto, Kāyasakkhi, Diṭṭhippatto, Saddha-vimutto, Dhammānusāri, Atṭha purisapuggalā.

5. Develop the argument underlying one of the following controverted points :—

(a) Puggalo upalabbhati sacchikatṭha paramatṭhena, rūpaṇa upalabbhati sacchikatṭha paramatṭhenā ti? Amanta.

Aññam rūpam añño puggalo ti? Na he'vam vattabbe.

(b) Puggalo sampdāhāvati asmiṃ lokā paraṃ lokam parasmā lokā imaṃ lokanti? Amanta.

So puggalo sampdāhāvati asmiṃ loka paraṃ lokam parasmā lokā imaṃ lokanti? Na h'evam vattabbe.

6. Explain fully in Pāli :—

'Sanyojanasampayuttaṃ dhammaṃ paccayā sanyojanasampayutto dhammo uppaṭṭijati ārammaṇapaccayā.'

7. Write all that you know about Nivaraṇa-dukkam.

8. 'The whole of the Paṭṭhāna is practically nothing more than a huge series of logical exercises in the correlating of terms.' Criticise the remark, citing evidence from your text.

9. Translate into English :—

(a) 'Ariyā maggā vuṭṭhahitvā maggaṃ paccavekkhanti, phalam paccavekkhanti, nibbānaṃ paccavekkhanti, nibbānaṃ gotrabhussa vodānassa āvajjanāya ārammaṇapaccayena paccayo. Ariyā cetopariyañānena lokuttaracittasamaṅgissa cittaṃ jānanti. Lokuttarā khandhā cetopariyañānassa pubbenivāsānussatiñānassa yathākāraṃmūpagañānassa anāgataṃsañānassa āvajjanāya ārammaṇapaccayena paccayo.'

(b) 'Nahetu-sahetukam cuticittam nahetu-sahetukassa uppatticittassa anantaropaccayena paccayo. Nahetu-sahetukam bhavaṅgaṃ āvajjanāya, nahetu-sahetukam bhavaṅgaṃ nahetu-sahetukassa bhavaṅgassa, nahetu-sahetukā khandhā nahetu-sahetukassa vuṭṭhānassa anantaropaccayena paccayo.'

## EIGHTH PAPER

### FIRST HALF

Examiner—DR. NALINAKSHA DATTA, M.A., PH.D.

*The figure in the margin indicates full marks*

1. Write an essay on any one of the following :—

50

- The eight meditations leading to Nibbāna.
- The aims and objects of the seven Abhidhamma books.
- The psychological analyses given in the Abhidhamma treatises.
- The Tikkā written in Burma on the Abhidhamma works.

### SECOND HALF

Examiner—MR. GOKULDAS DE, M.A.

*The figure in the margin indicates full marks*

1. Translate any three of the following extracts into English :—

50

(a) Tattha katamaṃ neruttam?

Yā nirutti padasamhitā, yam dhammānaṃ nāmaso ñānaṃ. Yadā hi bhikkhu atthassa ca nāmaṃ jānāti dhammassa ca nāmaṃ jānāti, tathā tathā naṃ abhiniropeti, ayam vuccati atthakusalo dhammakusalo byañjanakusalo niruttikusalo pubbāparakusalo desanākusalo atitādhivacanakusalo anāgatādhivacanakusalo paccuppannādhivacanakusalo itthādhivacanakusalo purisādhivacanakusalo nāpāpāśakādhivacanakusalo ekādhivacanakusalo anekādhivacanakusalo. Evaṃ sabbāni kātābhanī janapadaneruttāni sabbā ca janapadaniruttiyo ayam nirutti padasamhitā.

(b) Sabbalokuttaro Satthā dhammo ca kussalapakkhato Gāṇo ca naraśiḥassa tāni tīpi visissare.

Tāni tīpi lokassa uttari  
ekāyanam jātikhayantadassā  
maggam pajānāti kitānukampī  
Etena maggena tarissu pubbe  
tarissanti ye cāpi taranti ogham  
tam tādissam devamanussasettḥam  
sattā namassanti visuddhipekkhā ti.

(c) Iti Bhagavā lokuttarajjhānam bhājento suddhikapaṭipadāya catukka-nayam pañchakanayan ti dve pi naye āhari. Tathā suddhikasuffāṭāya suffāṭāpaṭipadāya appanīhitapaṭipadāya pi tasmā evam āhari ti puggala-jhāsayena c'eva desanāvāsesena ca tadubhayam pi hetthā vuttanayen' eva veditabham. Evaṃ lokuttaram jhānam Chāveti ti ettha suddhikapaṭipadāya catukkapañcakavāsen' eva dve nayā. Tathā sasesū ti sabbesu pi pañcasu koṭṭhāsesu dasa nayā bhājitā. Tatr' idam pakinnakam

Ajjhattaṇ ca bahiddhā ca rūpārūpesu pañcasu  
Satta atthaṅgapariṇāmanam nimittam paṭipadā pati ti

(d) Bodhisatto solasavassakāle yeva sabbasippe nipphattim pāpuni, atha pitā rajjam dātukāmo nātarā saddhim mantetvā Maddarājakulato mātuladhitarā Maddim nāma ānetvā solasannam itthisahassannam jettḥikam aggamaheṣim katvā Mahāsattam rajje adhiśiñci, Mahāsatto rajje paṭiṭṭhitakālate paṭṭhāya devasakam chasatasahassāni vissujento mahādānam pavattesi. Aparabhāge Maddi deve puttam vijāyi tam kaccana-jālena paṭicchissu ten' assa Jālikumāro tveva nāman karissu, tassa padasā gamanakāle dhitarā vijayi, tam kaṇhājīnena paṭicchissu, ten' assā kaṇhājīnā ti eva nāman karissu, Mahāsatto ekamāsassa chakkhuttam alaṅkata-buttikkhandhavaragato chadānasālā oloketi.

## ARABIC

### FIRST PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner—MAULVI S. MUHAMMAD HAIDAR*

*Attempt Question 2 and ANY TWO of the rest*

1. Give a short sketch of the life of al-Mu'arrī, and give an estimate of his value as an Arabic poet.

2. Translate into English :—

ولو ان المطى لها عقول \* وجدك لم نشد بها عقالا  
مواصلة بها رحلى كاني \* عن الدنيا اريد بها انفصالا  
سالن فقلت مقصدنا سعيد \* فكان اسم الامير لهم فالأ  
مكلف خيله قنص الاعدادى \* وجاعل غابه الاسل الطوالا  
تكان سوابق حملته تغنى \* عن الاقدار صرنا وليتذالا

3. Explain in Arabic :—

و يا اسيرة حجليها ارى سفها  
وجدك لم نشد بها عقالا  
ما سرت الا وطيف منك يصبنى  
سرى امامى و تاربيا على اثرى  
لو حط رحلى فوق النجم رافعه  
وجدت ثم خيالا منك منتظرى  
يود ان ظلام الليل دام له  
و زيد فيه سواد القرب والبصر  
لو اختصرتم من الاحسان زركم  
والعذب يهجر للانراط فى الخصر

4. Translate into English, adding notes where necessary :—

معان من احببنا معان \* تجيب الصاهلات به القيان  
وقفت به لصرون الودحتى \* اذلت دموع جفنى ما تصان  
و لاحت من بروج البدر بعداً \* بدرورها تبرجها اكتفان  
فلو سمع الزمان بها لضنت \* و لو سمعت لضن بها الزمان  
وزقن تمكنا من كل قلب \* فليس لغير هن به مكان

5. Give the religious views of Abu'l-Ala-al-Ma'arri as they can be gathered from your text.

## SECOND HALF

Examiner—SIR A. SUHRAWARDY, KT., M.A., PH.D., M.L.A.

Attempt Question 3 and ANY TWO of the rest

1. Give a critical estimate of the *Mu'allaqat* of Tarafa.
2. Narrate the circumstances which led to the composition of the *Mu'allaqat*

of حارث بن جلفة .

3. Translate into English :—

لخولة اطلال ببرقة شهمد  
تلوح كباقى الوشم فى ظاهر اليد

قرنا بها صعبى على مطيهم  
 يقولون لا تهلك اسى ر تجلد  
 كان حدرج المالكية عدوة  
 خلايا سفين بالانواصب من دد  
 عدولية او من سفين بن يا من  
 يجور بها الملاح طور ار يهتدى  
 يشق حباب الماء حيزومها بها  
 كما قسم الترب امفائل باليلد

4. Explain in simple Arabic —

سعى ساعيا غيظ بن مرة بعد ما  
 تبزل ما ببن العشيرة بالدم  
 تداركتما عبسا و ذبيان بعد ما  
 تفانوا ورقوا بذهبه عطر منشم  
 و قد قلتما ان تدرك الاسلام راسعا  
 بمال و معروف من القول نسلم  
 فاصبحتما منها على خير موطن  
 بعبددين فيها من عقوق و مائم  
 عظيمين فى عليا معد هديتما  
 و من يستبج كنزا من المجد يعظم

5 Translate into English, adding notes where necessary :—

ورثنا المجد قد علمت معد \* نطامن دونه حتى يبيننا  
 و نحن اذا عماد الحى خرت \* على الاحفاض نمنع من يلينا  
 نجذر رؤسهم فى غيربر \* فما يدرون ما ذا يتقرونا  
 كان سهرننا منا و منهم \* مخاريق بايدى لا عبيننا  
 كان ثيابنا منا و منهم \* خضبن بارجوان ار طليننا



## SECOND PAPER

## FIRST HALF

*Examiner—MAULAVI A. HADI**The figures in the margin indicate full marks**Attempt the FIRST question and ANY TWO of the rest*

1 Translate into English adding notes where necessary :—

18

قال و قد خفق رسول الله صلى الله عليه وسلم خفقة  
 و هو فى العرش ثم انتبه فقال يا ابا بكر آتاك نصر الله هذا  
 جبرئيل اخذ بعنان فرسه يقرده وعلى ثناياه النقع قال  
 و قد رمى مهجع مولى عمر ابن الخطاب بسهم فقتل فكان اول  
 قتيل من المسلمين ثم رمى حارثة احد بنى عدى ابن  
 النجار و هو يشرب من العوض فقتل ثم خرج رسول الله صلى  
 الله عليه وسلم الى الناس فعرضهم و نفل كل امرء ما اصاب  
 و قال و الذى نفسى بيده لا يقاتلهم اليوم رجل فيقتل  
 صابرا محتسبا مقبلا غير مدبر الا ادخله الله الجنة فقال  
 عمير بن الحمام اخو بنى سلمه و فى يده تمرات يأكلها بخ بخ  
 اما بينى و بين ان ادخل الجنة الا ان يقتلنى هؤلاء قال  
 ثم قذف التمرات من يده و اخذ سيفه فقاتل القوم حتى  
 قتل \*

2. Explain the following in Arabic :—

16

ثم ذكر بافى خبره مثل ما قال على بن ابي طالب  
 رضى الله عنه و قال فيه و انه مر برجل معه غنم و معه  
 ابن له صغير ماتت امه فهر يرضع من شاة ليست فى الغنم  
 لبرن غيرها فاخذ الشاه فناشده الله و اعطاه عشرة فابى فاعطاه  
 جميع الغنم فابى فلما رأى ذلك تنحى ثم نثل ثنانيته  
 فرماه: ففلق قلبه فقبل له قتلت رسول الله صلى الله عليه وسلم  
 فأتى صالحاً فقص عليه قصته فقال ابعد الله فقد كنت

انتظر هذا منه فرجم قبره الى اليوم واللييلة و هو ابو  
اغال \*

3. Render the following verses into prose order and explain them fully :— 16

ابكى ابى عمر بعين عزيزة  
قليل اذا نام الخلى هجردها  
وصوى لا انسى معاوية الذى  
له من سحرة العرتين وفودها  
وصغرا ومن ذا مثل صخر اذا غدا  
بسلمة الابطال قبا يقودها  
فذلك يا هند الزرية فاعلمى  
فيران حرب حين شب رقودها

1. Give the substance of the following :—

16

واتاه الخبر عن قریش بمسيرهم ليمنعوا عيرهم  
فاستشار النبي صلى الله عليه وسلم الناس واخبرهم  
عن قریش فقال ابوبكر فقال فاحسن ثم قام عمر فقال  
فاحسن ثم قام المقداد بن عمرو فقال يا رسول الله امض  
لما امرك الله فنحن معك والله لا نقول لك كما قالت  
بنو اسرائيل لموسى اذهب انت وربك فقاتلا انا ههنا  
قاعدون ولكن اذهب انت وربك فقاتلا انا معكما  
مقاتلون معلمون والذى بعثك بالحق لو سرت بنا  
الى برك الغاد يعنى مدينة الحبشة لجالدنا معك  
حتى تبلغه فقال رسول الله صلى الله عليه وسلم خذ  
ودعا له بخير \*

5. Give a short account of صاحب الاغانى.

16

## SECOND HALF

Examiner—PROF. A. S. SIDDIQUI

The questions are of equal value

Marks—60

1. Translate into English :—

ان الابل على غلظ اكبادها لنحن الى ار طانها  
 و ان الطير لتقع عرض البحر الى مظانها و بلغنى ان  
 ابن ذى اليمينين طاهر ابن الحسين لما ولى مصر دخلها  
 مضروبة قبابها مفروشة ارضها مزخرفة جدرانها و الناس  
 ركبانا و رجالا و النثار يميناً و شمالاً فاطرق لا ينطق حرفاً  
 و لا يرفع طرفاً ف قيل له فى ذلك فقال ما اصنع بهذا كله \*

2. Explain :—

و ليل كذكره كمعناه كاسمه  
 كدين ابن عباد كادبار فائق  
 شققنا بايدي العيس برد ظلامه  
 و بتنا على وعد من السير صادق  
 تزج بنا الاسفار فى كل شاهق  
 و ترمى بنا الامال من كل حائق  
 كان مطايانا سفار كانما  
 تمد اليهن الفلا كف سارق  
 كان نجوم الليل نظارة لنا  
 تعجب من اماننا و العوائق  
 كان نسيم الصبح فرصة ايس  
 كان سراب القيق خجلة رائق

3. Write a biographical note, in Arabic, on ابن بطوطه .

4. (a) Translate into English :—

فلما اقتنع طارق الاندلس نفر اليه لذريق و استنفر اجناد  
اهل الاندلس و كتب الى اولاد غيطشة و قد ترعرعوا و ركبوا  
الخيول و اتخذوا الرجال يدعوم الى الاجتماع معه على حرب  
العرب و يحذرهم من القعود عنه و بعضهم على ان يكونوا على  
عدوهم بدأ واحدة - فلم يجحدوا بدا و حشدوا و قدموا عليه

\*

(b) Write grammatical notes on the words overlined in the extract (a).

5. Translate into English, adding explanatory notes where necessary :—

واقبم من ذلك انه لا يمكن للغريب ان يخرج من بلاد  
فرنسا الا اذا ادى في ديوان الجواز عشرة فرنكات اما من يقدم  
الى بلاد الانكليز فليس عليه ان يبرز الجواز كما ان الخارج  
منها ايضا ليس عليه ان يؤدي شيئاً ولذلك يقال ان بلاد  
الانكليز بلاد الانكليز بلاد الحرية و سببه عندي والله اعلم ان  
الانكليز لما كانوا في الزمن القديم مختلفين عن سائر الافرنج  
في اسباب التمدن و العلوم احتاجوا الى ان يتساهلوا مع  
جيرانهم في اشياء تسميهم الى زيارتهم \*

### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

Examiner—MAULVI SYED MUHAMMAD HAIDAR

1. Translate into Arabic any three of the following :—

(a) It is stated of Hosain, the noble martyr of Kerbela, that a slave having once thrown the contents of a scalding dish over him as he sat at dinner, fell on his knees and repeated the verse of the Koran, 'Paradise is for those who bridle their anger'. 'I am not angry,' answered Hosain. The slave proceeded, 'And for those who forgive men'. 'I forgive you'. The slave, however, finished the verse, adding 'For God loveth the beneficent'. 'I give you liberty and four hundred pieces of silver', replied Hosain.

(b) The year following 1582 Akbar marched at the head of an army to the Punjab to repulse an invasion made from Kabul by his own brother Muhammad Hakim Mirza. The rebel brother had arrived close to Lahore before Akbar had reached Panipat. The news, however, of the march of Akbar produced upon him the conviction that his invasion must miscarry. He accordingly retreated from Lahore and fell back on Kabul.

(c) The steeds of these attendants were of Saracen origin and consequently of Arabian descent, and their fine slender limbs, small fetlocks, thin manes, and easy springing motions formed a marked contrast with the large-jointed heavy horses of which the race was cultivated in Normandy for mounting the men-at-arms of the period in all the panoply of plate and mail.

(d) Kathir b. Qays said, 'I was sitting with Abu Darda in the mosque of Damascus when a man came to him and said "I have come to you from Medina for a tradition which I have heard that you narrate from the Prophet : for no other purpose have I come." Abu Darda said, "I heard the Prophet say who so travels a road in search of knowledge will God lead in a road to Paradise. Verily the angels joyfully spread their wings over the *Tolubul-Im*. All creatures in heaven and earth and even the fishes in the depth of waters pray for the learned man. His superiority over the ordinary man is as that of the full moon over all the stars."

(e) If you send for the army from Syria, it is possible that Syrians, the former rulers, might fall upon you; and if you call away the army from Yamen, there is the danger of the Abisinian's attack; and in case you yourself leave this place it is probable that the Arabs might raise their heads. Hence it seems advisable that the people of Basra should be divided into three sections, one may be left with their families, the other to guard the refugees, and the third be sent to help the Kufans who are fighting with the Persians.

## SECOND HALF

Examiner—DR. A. HAQ

Translate into English *any three* of the following passages :—

(1) و لما زها العصر العباسى الاول في زمن الرشيد و  
 الامور و اطلقت الاسنة و الافكار - اخذ المغنون يفكرون  
 في تعديل الالكان و استنباط اسلوب جديد - و اول من تجرأ  
 على ذلك ابراهيم بن المهدي اخر الرشيد و كان من الطامعين  
 في الخلافة - فلما استتب الامر لاهيه انصرف هو الى الغناء  
 كما انصرف خالد بن يزيد الاموى الى الكيمياء لما يؤس من  
 الخلافة - و كن ابراهيم من اعلم الناس بالنغم و الرتر و  
 الايقاعات و اطبعهم في الغناء و احسنهم صوتا و هو يعد من  
 الطبقة الاولى ف عصره -

(2) رهاها موضع حكاية تناسب ذلك لا بأس بأيرادها  
حدثني فلان الدين قال كنت في عسكر الدريدان الصغير لما  
خرج الى لقاء التتر بالجانب الغربي من مدينة السلام في  
واقعتها العظمى سنة ست وخمسين وستمائة قال فالتقينا بنهر  
بشير من أعمال دجيل فكان الفارس منا يخرج الى المبارزة و  
تحتة فرس عربي وعليه سلاح قام كانه و فرسه الجبيل العظيم  
ثم يخرج اليه من المغول فارس تحتة فرس كانه حمار و في  
يده رمح كانه المغزل و ليس عليه كسوة ولا سلاح فيضحك منه كل  
من رآه - ثم ما تم النهار حتى كانت لهم الكرة فكسرونا كسرة  
عظيمة كانت مفتاح الشر - ثم كان من الامر ما كان -

(3) خلقنا للحياة و للممات  
و من هذين كل العادات  
و من يولد يعيش و يموت كان لم  
يمر خياله بالاكائات  
و مهد المرء في ايدي الرواقى  
كنعش المرء بين النائحات  
و ما سلم الوليد من اشتكاء  
فهل يخلو المعمر من اذاة  
هى الدنيا قتال نحن فيه  
مقاصد للحسام و للقناة  
و كل الناس مدفوع اليه  
كما دفع الجبان الى الثبات

(4) و لكن قومنا يابون الا ان تقام لهم الحجة و يعرض  
عليهم تفصيل الدليل - وهم يغلبون في ذلك و يلجّون و  
يتررون ان من التقصير ان العبد بالعقول ان يدعى مدع ان  
اللغتين متفرقان دون ان يدل على مواضع الفرق - فان من

الحق علينا حين نعلن ان العربية شئ ر العبرانية شئ اخر ان نقيم الدليل على هذا - ر كان من المحرم على صاحب التاريخ الطبيعى مثلا ان يعتز بنتائج البحث الطبيعى والكيمارى دون ان يدخل فى تفصيل الادلة الطبيعىة ر الكيمائية - كانه لا يصح لعالم ان يعتمد على نتائج البحث التى انتهى اليها الاخصائىون فى العلوم الاخرى -

(5) لم تكن حال الضعف التى ر صلت اليها مصر فى هذا الوقت الانتيجمة اطماع هؤلاء الوزراء الذين ما كان يهمهم من مصر ر امرها الا امتلاء بطونهم ر تثبيت مراكزهم وتقوية انفسهم ر احاطتها بسياس من المكر ر الخديعة مهما كانت الاساليب ر الطرق التى ر صلت بهم الى هذه الغاية قبيحة ارحسنة - رسواء عليهم أعمرت البلاد بعد ذلك ام خربت - لانهم ليسوا من ابناءها و لا من الذين يهمهم فلاحها ر نجاحها - بل هم على العكس من ذلك - يقرمون بقتل الظاهرين فى الامة حتى لا يكون فيها من يناظرهم فى العظمة ر لا من يناقشهم الحساب على تصرفاتهم السيئة -

#### FOURTH PAPER

#### FIRST HALF

*Examiner*—DR. AZIMUDDIN AHMAD, M.A., PH.D.

*The questions are of equal value*

*Answer ANY FOUR questions*

1. 'Religion had so little influence on the lives of the Pre-Islamic Arabs that we cannot expect to find much trace of it in their poetry.'

Refute or justify, in detail, the above statement.

2. Trace the origin and growth of historical literature in the first three centuries of the Hijra era.

3. Characterise the new poetry which followed the accession of the 'Abbāsids.

4. Comment, in detail, on the following remark :—

'The first century of 'Abbásid rule was an age of discovery and awakening.'

5. Whom do you consider to be the best of the Umayyad poets, and why?

6. Write notes on :—

(a) كتاب الاغانى, (b) ابر العلاء المعرى, (c) كتاب الفهرست,  
and (d) كتاب الشعرو الشعراء .

## SECOND HALF

Examiner—KHAN BAHADUR SHAMS-UL-ULAMA MD. HIDAYAT

HUSSAIN, F.A.S.B., M.R.A.S.

*The questions are of equal value*

*Answer ANY THREE of the following*

1. 'Perhaps the most interesting features of Spanish-Arabian poetry are the tenderly romantic feeling which not infrequently appears in the love-songs, a feeling that some times anticipates the attitude of mediæval chivalry; and in the second place an almost modern sensibility to the beauties of nature.' Discuss.

2. Give a short account of the historians of the Mamluk period, with special reference to the works of al-Maqrizî and al-Suyutî.

3. Who were the اخوان الصفا? Discuss their contribution to Arabic literature.

4. 'Ibn-i-Khaldun owed little to his predecessors, although he mentions some of them with respect. He stood far above his age, and his own countrymen have admired rather than followed him.' Justify.

5. Write notes on *any three* of the following :—

(1) Kitab-al-Milal wa'l-Nihal, (2) Hayy ibn-Yaqzan, (3) Ibn-i-Khallikan, (4) Ibn-i-Taymiyya, (5) Tarikh-ul-Khamis.

## FIFTH PAPER

### FIRST HALF

Examiner—PROF. M. Z. SIDDIQUI, M.A., PH.D.

*The questions are of equal value*

*Only FOUR questions are to be answered*

1. Describe and discuss, according to al-Zamakhshari, the necessity of the knowledge of Arabic Grammar for the study of the Islamic sciences.

2. (a) Explain fully the following passage :—

الكلمة هي اللفظة الدالة على معنى مفرد بالوضع ، و  
هي جنس تحته ثلاثة انواع: الاسم و الفعل و الحرف - و  
الكلام هو المركب من كلمتين اسندت احدهما الى الاخرى \*



(b) Define the three kinds of الكلمة and describe some of the grammatical peculiarities of each of them.

3. Explain fully :—

و كل مثني او مجموع من الاعلام فتعريفه باللام الا  
نحو ابائيس و عمائيتين ، عرفات و اذرعات ، قال :

و قبلى مات الخالدان كلاهما

عبيد بنى جحوان و ابن المضلل

اراد خالد بن فضله ، و خالد بن قيس بن المضلل ، و  
قالوا لكعب بن كلاب و كعب بن ربيعة ، عامر بن مالك  
بن جعفر ، و عامر بن الطفيل و قيس بن عتاب و قيس  
بن هزمة ، الكعبان و العامران و القيسان و قال : انا ابن  
سعد اكرم السعدينا ، و فى حديث زيد بن ثابت رضى  
الله تعالى عنه ، هؤلاء المحمدون بالباب ، و قالوا : طلحة  
الطلحات ، و ابن قيس الرقيات ، و كذلك الاسامتان  
و الاسامات -

4. (a) Translate the following into English, adding notes where necessary :—

(i) اذا ما دعوا كيسان كانت كهولهم

الى الغدر اولى من شبابهم المزد

(ii) لم تتلفع بفضل مؤزرها

دعد و لم تسق دعد فى العلب

(iii) اذا قال غار من تنوخ قصيدة

بها جرب عدت على بزوبرا

(b) Explain the grammatical problems illustrated by the above quotations.

5. (a) Translate into English, adding explanatory notes where necessary :—

و بعض الاعلام يدخله لام التعريف ، و ذلك على

نوعين ، لازم و غير لازم ، فاللازم فى نحو الذئب للثريا

و الصعق و غير ذلك مما غلب من الشائعة ، الا ترى انهما هكذا معرفين باللام اسمان لكل نجمة هذه المخاطب . و المخاطب و لكل معهود ممن اصاب بالصاعقة ، ثم غلب النجم على الثريا و الصعق على خويلد بن نفيل بن عمر بن كلاب ، فاللام فيهما وللاضافة في ابن دالان و ابن كراع مثلان في انهما لا تنتزعان \*

(b. Define الاعلام and give their grammatical properties, with illustrations

## SECOND HALF

Examiner—MAULVI A. HADI

The figures in the margin indicate full marks

Attempt the FIRST and SECOND questions, and ANY TWO of the rest

1. بينوا اقسام الحقيقة و المجاز مع الامثلة مفصلاً . 13
2. شرحوا شرحاً واضحاً و علم البيان و المطابقة و التضمن و الالتزام . 13
3. لم قال الله تعالى " قل هو الله احد الله الصمد " و لم يقل هو الصمد . 12
4. ما الفرق بين ما جاءنى القوم كلهم و ما جاءنى كل القوم . 12
5. بيوا الاختلاف فى قوله تعالى افترى على الله كذبا . 12  
ام به جنة -

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—PROF. M. Z. SIDDIQUI, M.A., PH.D.**ONLY THREE questions are to be attempted*

1. Explain in English according to al-Zamakhshari.

هو الذى انزل عليك الكتاب منه آيات محكمات هن ام الكتاب و آخر متشابهات فاما الذين في قلوبهم زيغ فيتبعون ما تشابه منه ابتغاء الفتنة و ابتغاء الفتنة و ابتغاء تأويله و ما يعلم تأويله الا الله و الراسخون فى العلم يقولون ائنا به كل من عند ربنا و ما يذكر الا السوالالباب - ربنا لا تزغ قلوبنا بعد اذ هديتنا و هب لنا من لدنك رحمة انك انت السهاب - ربنا انك جامع الناس ليوم لا ريب فيه ان الله لا يخلف الميعاد -

2. Render in simple Arabic and explain the grammatical problems referred to:—

( انى قد جئتمكم باية من ربكم انى اخلق لكم من الطين كهيئة الطير فانفخ فيه فيكون طيرا باذن الله و ابرئ الاكمه و الابرس و احي الموتى باذن الله )

( انى قد جئتمكم ) اصله ارسلت بانى قد جئتمكم فعطف الجار و انتصب بالفعل - ( و انى اخلق ) نصب بدل من انى قد جئتمكم ار - جر بدل من اية ' او رفع على هى انى اخلق لكم ' و قرئ انى بالكسر على الاستئناف اى اقدر شيئا مثل صورة الطير ' ( فانفخ فيه ) الضمير للكاف اى في ذلك الشئ المماثل لهيئة الطير ' ( فيكون طيرا ) فيصير طيرا كسائر الطيور حيا طيارا ' و قرء عبد الله فانفخها - قال كالهبرى تنهى ينفخ الغفما - و قيل لم يخلق غير الغفاس -

3. Explain according to al-Zamakhshari and give the historical event referred to :—

فاما الذين كفروا فاعذبهم عذابا شديدا في الدنيا و  
الآخرة و ما لهم من ناصرين ، و اما الذين آمنوا و عملوا  
الصالحات فيؤتيهم اجرهم و الله لا يحب الظالمين ، ذلك  
فتلوه عليك من الايات و الذكر الحكيم ، ان مثل عيسى عند  
الله كمثله آدم خلقه من تراب ثم قال له كن فيكون ، الحق  
من ربك فلا تكن من الممترين ، فمن حاجك من بعد ما  
جاءك من العلم فقل تعالوا ندع ابناءنا و ابناءكم و  
نساءنا و نساءكم و انفسنا و انفسكم ثم نبتهل فنجعل  
لعنة الله على الكاذبين -

4. Explain with reference to the context :—

فان قلت فما معنى قوله او يحاجوكم على هذا قلت  
معناه دبرتم ما دبرتم لان يوتى احد مثل ما اوتيتم ولما يتصل  
به عند كفركم به من حاجتهم لكم عند ربكم ، و يجوز ان  
يكون هدى الله بدلا من الهدى و ان يوتى احد خبر ان على  
معني قل ان هدى الله ان يوتى احد مثل ما اوتيتم او  
يحاجوكم حتى يحاجوكم عند ربكم فيقرعوا باطلكم بعقهم و  
يدحضوا حجبتكم -

5. Explain in Arabic any four of :—

(a) لما ترون الدنيا به من سرورها

يكون بكاء الطفل ساعة يولد

(b) فقل للحواريات يبكن غيرنا

و لا تبكنا الا الكلاب الذوايع

(c) من كان مسرورا بمقتل مالك

فليات نسوتنا برجه نهار

(d) تـود عـدوى ثم تـزعم انـني  
مد يـقلك ليس النـرك عنـك بـعازب

(e) ر ر الله لو لا تمره ما حـببته  
ر لا كان ادنى من عبـيد و مشرق

## SECOND HALF

Examiner—PROF. M. SHAFI, M.A.

*The questions are of equal value*

*Attempt only THREE questions*

1. Translate into English and write notes on the words and phrases overlined :—

ر عن ابى هريرة قال سمعت رسول الله صلى الله عليه و  
سلم يـقول من خرج من الطاعة و فارق الجماعة فمات مات  
ميتة جاهلية و من قاتل تحت راية عمية يغضب لعصبية او  
يدعول لعصبية او ينصر عصبية فقتل فقتله جاهلية و من  
خرج علي امتي بسيفه يضرب برها و فاجرهما و لا يتعاشى من  
مومنها و لا يفى لذى عهد فليس مني و لست منه -

ر عن عبد الله بن عمر قال قال رسول الله صلى الله عليه و  
سلم الا كلـكم راع كلـكم مسؤل عن رعيته فالامام الذى على  
الناس راع و هو مسؤل عن رعيته و الرجل راع على اهل  
بيته و هو مسؤل عن رعيته و المراء راعية على بيت زوجها  
و ولده و هى مسؤلة عنهم و عبد الرجل راع على مال سيده و  
مسؤل عنه الا فكلـكم راع و كلـكم مسؤل عن رعيته متفق  
عليه -

عن العارث الاشعري قال قال رسول الله صلى الله عليه و  
سلم امركم بخمس : بالجماعة و السمع و الطاعة و الهجرة و الجهاد  
في سبيل الله و انه من خرج من الجماعة قيد شبر فقد خلع ربة

الاسلام من عنقه الا ان يراجع ر من دعى بدعوى الجاهلية فهو  
من جنى جهنم و ان صام و صلى و زعم انه مسلم \*

2. Explain in Arabic :—

ر عن ابن موهب ان عثمان بن عفان قال لابن عمر اقض  
بين الناس قال او تعافيني يا امير المؤمنين قال و ما تكره  
من ذلك قد كان ابرك يقضى قال لاني سمعت رسول الله صلى  
الله عليه وسلم يقول من كان قاضيا فاقضى بالعدل فبالعري  
ان ينقلب منه كفافا ، فما راجعه بعد ذلك رواه الترمذي  
و في رواية رزين عن نافع ان ابن عمر قال لعثمان يا امير  
المؤمنين لا اقض بين رجلين قال فان اباك كان يقضى فقال  
ان ابى لوارشك عليه شى سأل رسول الله صلى الله عليه و  
سلم و لو اشكل على رسول الله صلى الله عليه و سلم شى سال  
جبرئيل عليه السلام و انى لا اجد من اسأله و سمعت رسول الله  
صلى الله عليه و سلم يقول من عان بالله فقد عان بعظيم و  
سمعه يقول من عان بالله فاعينه و انى اعون بالله ان  
تجعلنى قاضيا فاعفاه و قال لا تخسر احدا \*

ر عن ابي ذرانه سمع رسول الله صلى الله عليه و سلم يقول من  
ادعى ما ليس له فليس منا و يتبوا مقعدة من النار -

و عن ابن مسعود قال قال رسول الله صلى الله عليه و سلم  
خير الناس قرنى ثم الذين يلونهم ثم الذين يلونهم ثم يجرى  
قورم تسبق شهادة احدهم يمينه و يمينه شهادة \*

3 Translate into English, adding notes where necessary :—

عن على قال قال رسول الله صلى الله عليه و سلم للمسلم  
على المسلم ست بالمعروف - يسلم عليه اذا لقيه و يجيبه اذا  
دعاه و يشمته اذا عطس و يعود اذا مرض و يتبع جنازته اذا  
مات و يهب له ما يهب لنفسه -

وعن عمران بن حصين قال كنا في الجاهلية نقول انعم الله بك عينا و انعم صباها فلما كن الاسلام نهينا عن ذلك -  
عن يعلى قال ان حسنا وحسينا استبقيا الى رسول الله صلى الله عليه وسلم فضمهما اليه وقال ان الولد مبغلة مغبنة -

وعن يعيش بن طخفة بن قيس الغفاري عن ابيه ر كان من اصحاب الصفة قال بينما انا مضطجع من السحر على بطني اذا رجل يحركني برجله فقال ان هذه ضجعة يبغضها الله فنظرت فاذا هو رسول الله صلى الله عليه وسلم -

عن ابى هريرة عن النبي صلى الله عليه وسلم قال ان الله يحب العطاس و يكره التثاؤب فاذا عطس اعطس احدكم و حمد الله كان حقا على كل مسلم سمعه ان يقول له یرحمك الله فاما التثاؤب فانما هو من الشيطان فاذا تثاؤب احدكم فليرده ما استطاع فان احدكم اذا تثاؤب ذكك الشيطان منه -

4. Quote or give the gist of (i) some *Hadith* which throw light on the personal habits of the Prophet and (ii) some sayings of his relating to

الشفقة و الرحمة على الخلق

5. Write a note on the author of the *Mashkdt al-Maṣḍbīh* and account for the great popularity which his work has had for all these centuries.

## SEVENTH PAPER

### FIRST HALF

*Examiner*—DR. A. AHMAD, PH.D.

*Answer ANY THREE questions*

*The questions are of equal value*

1. Estimate the character of ' Umar I as a man and as a Caliph.
2. Give an account of the reforms introduced by ' Abdu'l-Malik b. Marwan.
3. Sketch the career of Saladin.
4. Briefly describe the military organisation under the ' Abbasids.
5. Discuss Hajjaj as man and governor.

## SECOND HALF

*Examiner*—KHAN BAHADUR SHAMS-UL-ULAMA MD. HIDAYET  
HUSSAIN, F.A.S.B., M.R.A.S.

*Answer ANY THREE of the following*

*The questions are of equal value*

1. Give an account of the achievements of Abdur Rahman III of Spain.
2. Discuss the causes of the downfall of the Muslim supremacy in Spain.
3. Discuss the position of the Fatimides of Egypt in the history of Islam.
4. Sketch briefly the career of Alauddin Khilji, and mention the cause that led to the final overthrow of his dynasty.
5. What were the chief causes of the Mughal invasion of the Deccan States? Under whom was the province as a whole subjugated, and what were the effects of dismemberment of the Deccan kingdoms?

## EIGHTH PAPER

(ESSAY)

*Examiners*—{SIR A. SHURAWARDY, KT., M.A., PH.D., M.L.A.  
PROF. M. Z. SIDDIQUI, M.A., PH.D.

*The figures in the margin indicate full marks*

Write an essay on any one of the following :—

100

- (a) Contribution made by the Muslims to the science of history.
- (b) The development of *Hadith* Literature.
- (c) The origin and development of Muslim Jurisprudence.
- (d) الاسلام دين الفطرة
- (e) كما تدین تدان

## PERSIAN

## FIRST PAPER

*Examiner*—PROF. A. KADIR, M.A.

*The figures in the margin indicate full marks*

## FIRST HALF

1. — مطالب ابیات ذیل را بفارسی شرح دهید: 12

بر نهاده ز بهر تاج قدم

پای بر فرق عالم و آدم



دو جهان پیش همتش بدو جو  
 سر ما زاغ و ما طغی به شنو  
 پای ار تاج فرق آدم شد  
 دست او رکن عالم شد  
 بار گیرش سوی ازل معراج  
 نرد بانش سوئی ابد منهای  
 گفت سبعانش الذی اسری  
 شده ز انجا بمسجد اقصی  
 در شب از مسجد حرام بگام  
 رفته و دیده و آمده بمقام

- 10 یکی از منتخبات ذیل را شرح دهید و 2.  
 بنویسید که بکدام مزیت از مزایای حیات  
 نبوی یا مسائل علم کلام اشاره کرده:—

(a) هرچه در زیر چرخ نیک و بدند  
 خوشه چینان خرمن خردند  
 چون در آمد ز بارگاه ازل  
 شد بدر راست کار علم و عمل  
 هم کلید امور در دستش  
 هم ره امر بسته در هستش  
 مایه نیک و سایه بد اوست  
 سبب بود رهست و باشد ارست

(b) آدم از مادر عدم زاده  
 ار چراغی بدر فرستاده  
 غیب یزدان نهاده در دل او  
 آب حهوان سرشته در گل او

دیده ار بگاه منزل خواب  
تا سومی عرش بر گرفته حجاب  
جان او برده در طریقت حق  
گروهر حضرت حقیقت حق

(c) عقل سلطان قادر خوشخوست  
آنکه سایه خدای گیرند اوست  
سایه با ذات آشنا باشد  
سایه جز بنده وار کی باشد  
سایه را اختیار کی باشد  
عقل گل تخته زیر گل دارد  
هر کجا امر امر قل دارد

10 خلاصه کلام حکیم سنائی در مسئله معراج و حقیقت آن بفارسی ساده بنویسید \*

8 انتخاب ذیل را شرح دهید: —

(a) عقل بر هیچ دل ستم نکند  
بطمع قصد مدح و ذم نکند  
عقل خود کارهای بد نه کند  
هرچه آن ناپسند خود نه کند

(b) عقل جز خواجه محقق نیست  
عقل صوفیچه مبدیق نیست  
عقل هرگز بکذب راضی نیست  
عقل هرگز وکیل و قاضی نیست

10 "حکیم سنائی غزنوی از کبراء طائفة صوفیه است" و سخنان ویرا باستشهاد در مصنفات خود آورده اند، و کتاب حدیقة الحقیقة.

ہر کمال ری در شعر، و بیان اذواق و مراجید  
ارباب معرفت و توحید، ریلی قاطع و برہانی  
ساطع است“ \*

کلام بالا را تنقید کنید \*

## SECOND HALF

Examiner—MAULVI SHA KALIMUR RAHMAN, M A.

*The questions are of equal value*

*Only THREE questions are to be attempted*

1. ابیات ذیل را بعبارت فارسی خیلی سادہ،  
معنی کنید و مسائل تصوف را کہ بانہا اشارت  
رفتہ بیان فرمائید:—

دل من باغدان عشق و حیرانی گلستانش  
ازل دروازہ باغ و ابد حد خیابانش  
چنان باغی کز گلچین نیارد گل برون بردن  
نہ آن باغیکہ یابد خارجین از بیم دورانش  
گلی کز خرمنی ری را بخنداند چو فروردین  
نہ آن گل کز وداع شاخ گریاند زمستانش  
گلی زین باغ گرچہ بیانی دستی از بینش  
کہ نقش لوح محفوظست بر اوراق و اغصانش  
اگر سر در هوا گردد کسی باری دران رادی  
کہ گر در چہ فتد ہمدرد باشد ماہ کنعانش  
نشا، معرمان بزم عشق آیا چہا باشد  
کہ درد و داغ میریزند بر بیرون نشینانش

2. (a) عرفی قصیدہ بالا را در تعریف کہ گفتہ ؟  
و متابعت از کدام شاعر و چہ قصیدہ او نمودہ ؟  
مطلع آنرا بنویسید \*

(b) اصطلاحات ذیل را شرح دهید:—

حیرانی - لوح محفوظ - ماه کنعان - عقل

اول - ازل - حدوث - قضا \*

3. خلاصه مطلب اشعار ذیل را خواه تحت

(الف) خواه (ب) در عبارت فارسی خرد تان

بیان فرمائید و اشارات و تلمیحاتیکه شاعر دران

بکار برده راضح نمائید:—

(الف)

تا کون ترا اصل مهمات نخواندند

نشنید قضا ترجمه لفظ اهم را

تا مجمع امکان و وجوبت نه نوشتند

مررد متعین نشد اطلاق اعم را

تقدیر بیک ناقه نشانید در محمل

سلمای حدوث تو و لیلائی قدم را

تا نام ترا افسر فهرست نکردند

شهرآزده مجموعه نه بستند کرم را

(ب)

مریم من فیض جبریل از مزاج خود گرفت

مریمی را برد بالا ذهن عیسی زای من

آن بهشت معنیم کز بعد معزولی هنوز

خدمت طربی بود ننگ چمن پیرای من

مرحبا ای باده کیفیت روح القدس

کامدی چون عشق در رفتی ز سرتا پای من

4. اشعار ذیل را به وضاحت تمام شرح دهید :—

(a) میتوان کردن تلافی عمر ضائع کرده را  
گر ز نو برگ گیاهی تازه کرده برگ کاه  
شاهد معنی عیان و ما بصورت ملتفت  
ای درون چهل ما چون روی نادانی سیاه

(b) امکان وجود دشمن تو ز نار میدان آفرینش  
عیسی مگس تکلم قر حلوائی دکان آفرینش

5. بدلائل بیان فرمائید که مقوله ذیل بچه حد نسبت  
معرفی درست آید \*

”مخترع طرز تازه ایست که الحال مستعدان و اهل  
زبان و سخن سنجان تتبع ارمی نمایند“ \*

## SECOND PAPER

Examiner—AGA MD. KAZIM SHIRAZI

The figures in the margin indicate full marks

## FIRST HALF

1. Explain fully in Persian one of the following extracts :—

14

A.

میان در عالم گیا منزلت  
که بوی و مزه رنگ را مبتداست  
گیا سوی هشیار پیغمبر است  
که با خالق و خلق پاک آشناست  
همها را پدر دان درست ای پسر  
وگر من قدرت ام گیا خود نیاست

نه فاني نه باقي گيا هست از آنكه  
بقار فنا را در و ملتقا ست  
بشخص است فاني و باقي بنوع  
پس اين گهر عالي رپر بها ست

B

چو از برج حمل خورشيد اشارت كرد زى صحرا  
بفرمانش بصحرا پر مطرا گشت خلقانها  
نگونسار ايستاده مر درختانرا نمي بيني  
دهانهاشان روان بر خاك بر كردار تعبدانها  
درختانرا بهاران كار بندانند و تابستان  
وليكن شان نفرمايد جز آسايش زمستانها  
بقول ماه دي آبي كيـ انا باشد و لاغرا  
نياسايد شب و روز ترا باشد چو سندانها  
كه گويد گر و آهورا كه جفت آنگاه بايد تان  
همي جستن كه زادن تان نباشد جز بنيسانها

2. Give in Persian the substance of the following lines and comment on the main idea :— 8

در عالم دوم كه بود كارگاهشان  
ويران كنندگان بنا و بنا گرند  
روزي دهان پنجم حواس و چهار طبع  
خالي گران نه فلک و هفت اخترند  
رز مشرفان ده اند بگرد سرايشان  
زان پنجم اندرون رزان پنجم بر درند  
در پيش سر دو دكان دارند از آسمان  
استاده اند هر چه فروشنند همي خرند

8. Annotate any two of the following :—

14

(a) ترا خدای ز بهر بقا پديد آورد  
ترا ز خاك و هوا و نبات و حيوان را

نگاه کن که بقا را چگونه می‌کوشد  
 بخوردگی منگر دانه سپندان را  
 در سرای نه چوب است بلکه دانائست  
 که بنده پی نبین جز خدای سبحان را

(b) جوهر نیند ر جوهر ایشان بنزد عرض  
 معرور نهاده عرض اند و نه معرور اند  
 خوانند بر تو نامه اسرار بی‌حسوف  
 دانند کردهای تو بی آنکه بنگرند  
 پیدا از آن شدند که گشتند نا بدید  
 زان بی تن و سرند که اندر تن و سرند

(c) هیچ نگفتی که این که کرد و چرا کرد  
 کار عظیم است چیست عاقبت کار  
 من چه بکارم خدای را که ببایست  
 کردن چندین هزار کار بی آواز  
 گرش نبـردم بکار بیمده‌گی کرد  
 بیمـدگی ناید از مهیمن قهار

4. Discuss in Persian the merits and demerits of Nasir-i Khusrau as compared with those of his contemporary poets. 14

## SECOND HALF

Examiner—PROF. M. Z. SIDDIQUI, M.A., PH.D.

1. Discuss the chief characteristics of Qá'ání's poetry and illustrate them. 15

Or,

Give an estimate of Qá'ání's knowledge of scholastic philosophy of Islam, so far as it can be gathered from the perusal of his Qasidas.

2. Give, in Persian, the substance of any two of the following :— 15

(a) در شهنه چون کشید شه زنگ لشکرا  
 سلطان رزم را ز سر افتاد افسرا

باز سفید روز بپسید از آشیان  
 زاغ شب سیاه بگسترد شهپرا  
 تاریک شد سپهر چو ظلمات و اندرو  
 تا زان ستاره چو ن بیاهی سکندرا  
 چونان شبی دراز که پنداشتی قضا  
 یکره بریده نانش تا روز معشرا  
 افرخت چهره زمین تل خاکستری سهیل  
 چون از درون توده خاکستر اخگرا  
 گفتی فرشته است ببالای اهرمن  
 روشن فلک فراز هوای مکدرا  
 گردون پر ستاره بر آن قیرگون هوا  
 چون بر - رنجاشی اکلیل قیصر

(b) الا یا ساقیا می ده بجان من بیای پی ده  
 دمام می خور و می ده که میترسم خمار آید  
 سیه شد از ریا روزم بده آب ریا سوزم  
 بیجانت گرد و صد خرمن ریا یکجو بکار آید  
 نمیدانی کنار سبزه چون لذت دهد باده  
 خصوص آندم که از گلزار باد مشکبار آید  
 بحق باده خوارانی که می نوشند با خوبان  
 که بی خوبان بکامم آب کونر ناگوار آید  
 شرابی تلخ خواهم با بتی شیرین که از شورش  
 خرد دیوانه گردد کوه صحرا بیقرار آید  
 الا یا سرور سیمینا بده آن باده میذا  
 که بینی از که سینا تجلی آشکار آید

(c) شاه آفریدون کز سمک بر رفته صیثش تا فلک  
 با خلق کردار ملک با خلق و دیدار بشر



مغلوب حکمش چار حد منکوب قهرش دیور دد  
 هم حکمران بر نیک و بد هم قهرمان بر خیر شر  
 بر عالم ر آدم کیا کخش مطاف از کیا  
 جنت ز خلقش یک گیا دوزخ ز قهرش یک شر  
 عین زمین عون زمان شاه جهان ماه مهان  
 غیث کرم غوث امان فصل ادب اصل هنر  
 کن بهی بحر بها هم با دهی هم با نهی  
 خورشید بآرایش سها یاقوت با جودش مدر  
 مذبح از تیغش سمک مجروح از محش فلک  
 مرجوح با خلقش ملک مطروح با نطقش شکر  
 خشمش چو دوزخ جانگزا قهرش چو جنت جانفزا  
 هم تابع حکمش قضا هم پیرو امرش قدر

8. Explain with reference to the context any five of :—

10.

- (a) زده در دشت لاخرگه، که لا معبود الا الله  
 ز کاخ نفی جسته ره بخلوتگاه استثناء
- (b) بر گرد ماه کشته یک خوشه ضیمرانرا  
 بر شاخ سرو هشته یکدسته یاسمین را
- (c) ار گنج شائگان و منم آن گدا که هست  
 بر گنج باز دیده حسرت نگر مرا
- (d) گمان بری که معلق نموده اند بسحر  
 ز چار گوشه البرز چار سندان را
- (e) عقد ثریا در لبش سیما در در غبغبش  
 و آن زلف هندی مشربش کفری که ایمان پرورد
- (f) تا که کالای رجود تو ببازار آمد  
 آسمان بر در دکان عدم زد مسمار

(g) عریق نیل فلک شد ستاره چون فرعون  
نمود تا ید بیضاء ز خود کلیم سحر

4. Render into simple Persian prose, adding notes where necessary :— 10

از سنگ سازد توتیا ر ز خاک آرد نیمیا  
از درد انگیزد صفا و ز درد درمان پرورد  
بر گل فشانی گل شود ، بر خس چکد سنبل شود  
زاغ او خورد بلبل شود صد گونه العان پرورد  
جلاّب جان قلاب تن مایه خرد دایه فطس  
طعمه بیان لقمه سخن کن لقمه لقمان پرورد  
تبیان کند تلبیس را انسان کند ابلیس را  
هوش هزار ادریس را در مغز نادان پرورد  
می چون دل بینا بود کورا بدن مینا بود  
یا آتش سینا بود کش آب جهران پرورد  
دل را از زاید شعف جان را از ز خیزد شرف  
چو نانکه گوهر را صدف از آب نهسان پرورد

### THIRD PAPER

#### FIRST HALF

Examiner—AGA MD. KAZIM SHIRAZI

The figures in the margin indicate full marks

1. 10 فرق بین علم کلام و حکمت را بتفصیل شرح دهید \*
2. 10 علم چیست و چگونه حاصل میشود - اقسام آنرا ترومیم نمائید \*
3. 10 حالات عناصر اربعه را بهان کنید \*

یا

اصطلاحات ذیل را تعریف نمائید :—

قیاس اقترانی - عرض اضافی - قضیه حملیه - تصدیق -  
 قار الذات - کلیات خمسہ - علم نظری - صرورت نوعیه \*

10 در خصوص عبارت پردازی و انشا نویسی ابروالفضل  
 علامی تنقید فرمائید \*

10 خلاصه نامه که حضرت شاهنشاه اکبر بشفای مکه  
 نوشته بود بعبارت خود آرید \*

یا

مسطورات ذیل را بفارسی ساده ارقام نمائید :—

ستایش و نیایش عتبه کبریای احدیت جل جلاله  
 تقدس اسمائه بمثابة ایست که اگر جمیع نقاط عقول و  
 جداول فہوم با جنود مدرکات و عساکر علوم فراہم آیند از  
 عہدہ حرفی از آن کتاب یا بر توی از ان آفتاب نتوانند  
 برآمد اگرچہ در دیدہ تحقیق جمیع ذرات مکنونات سرچشمہ  
 حمد ایزدی اند کہ از زبان بی زبانی بر آمدہ تشنہ لبان  
 و تفسیدہ زبان بیدائی نا پیدائی حمد حقیقی را ترزبان  
 و سیراب دارند پس همان بہتر کہ کمند اندیشہ از کنگرہ  
 جلال صمدیت کہ جانہای پاکان آویختہ ارست کوتاه دارد \*

## SECOND HALF

Examiner—PROF. A. S. SIDDIQUI, M.A., PH.D.

*The questions are of equal value**Answer ANY FOUR questions*

جواب بپارسی بنویسید

1. عبارت ذیل را بحوالہ متن کتاب شرح دهید :—  
 زہنب در اطاق خانم سفرہ را حاضر کرد - بر روی تو شک

در پهلوی هم بنهشتیم - غذا عبارت بود از بلور کباب پر درمیان نان با خاکینه شب مانده و پنیر و دوغ و ماست و عسل و خربوزه اصفهان و امروند و زرد الو - چون سفره بدیدم بر روتا تا بیدم که "زینب بجان مادرت بگو" به بینم ' چگونه در این مدت اندک این همه فراهم آوردی ؟ اینک سفره در خورشاهان " \*

2. رخت نو پوشیدن و بگرما به رفتن و بشکلی دیگر پدیدار شدن حاجی بابا را بیان نمائید \*

3. معانی الفاظ و فقرات مذکوره ذیل را شرح دهید: —

دعای بی بینه - دوست از را در دماغه امید دیدم - و هرگز بخاطرم نگذشت که من در میان پیغمبران بنی اسرائیل بجز تعویل خنده جوابی نشنیدم - میخواهد بگویم من برود - قبا بی هزار دکه - مواظب - کسی که کوه ابرقیش را با دعا ازجا تواند کند - ببشکن زنان رقصیدن - شلاق - چکمه شلوارش چنان بی معنی و بدنما که سائر عورت نه - اطفای نائره - بزهر چشم غدغن کردن - گریه در گلیم گره شد \*

4. (a) "علم اخلاق بعد از علم معرفت اشرف علوم است" \*

قول محوله بالا را شرح دهید \*

(b) فضائل عدالت و میانه روی را بیان نمائید \*

5. فرق میان الهام و وسوسه و علامت هریک از آن را تحریر نموده معالجه و سارس را شرح دهید \*

## FOURTH PAPER

## FIRST HALF

Examiner—AGA MD. KAZIM SHIRAZI

*The figures in the margin indicate full marks*

1. Translate into English (a), and (b) or (c) :—

30

(a) برای طفل لازم است که دایه لایق معتدل المزاج تعیین کنند چه کیفیت مزاجی و نفسانی دایه در مولود سرایت کند و چون در شریعت حقه وارد است تعیین اسم در روز هفتم کردن اولی است متابعت باید کرد و همانا حکمت در تأخیر آن باشد که بعد از تأمل نامی لایق بنهند چه اگر نامی نامالایم تعیین کنند همه عمر ازان در کدورت باشد و چون رضاع تمام شود بشأدیب او باید پرداخت تا کسب اخلاق ذمیمه نکند چه قابلیت ایشان بر کمال است و میل طبیعت بر ذائل در نفوس مرکوز و در تهذیب اخلاق او بر وجهی که گفته شد تأسی بطبیعت نموده ترتیب نگاه دارند و چون اول آثار تمیز حیا ست غلبه حیا دلیل نجابت و فصیلت باشد چون این خصلت از او مشاهده رود در تادیش اهتمام زیاد باید نمود چه نفوس صبیان بمنزل لُوح ساده باشد و قبول صورت بسهرت نماید بعد ازان او را شرائع دین و آداب سنن بیاموزند و بمواظبت بران دارند \*

(b) خطابه دبیر اعظم بهرامی در بارگاه لسان الغیب خواجه شمس الدین محمد حافظ \* "بر خیز و از زاریه عزلت بیرون آی - وطن تو و خاک پاک تو مدتها است که سر از قید عرب و ترک پیچیده بیرق استقلال خود را بر روی شعائر تمدن باهتر از آورده است - دیگر شتربانان بنی العباس در زوایای مملکت تو قلمفرسائی نمی کنند -

دیگر راهزنان مغول در خاک نشاط خیز تو مجال دعوی اهلیمه ندارند - دیگر فقط میان جعفر آباد و مصلی برای توعبیر آمیز نیست، شمال و جنوب و شرق و غرب وطن تو همه برای توعبیر خیز و عنبر آمیز است - یک بیرق در وطن تو در اهتزاز است - یک قومیت برای توتشکیل تجمع می دهد - دوران تشتت و تفرقه سپری شد - بجای اهرمن اینک سروش است که در وطن مقدس و مملکت عزیز تو مشغول سلطنت و حکمفرمائی است - پس از سیزده قرن باز ایران بدست ایرانی آمده است” .

(c) روز عید نوروز دستور است که اگر شخص با پنجاه کس آشناست ایشان دست جمع یا سه و دو و فراده بدفعات درخانه او برای مصافحه و دیده بوسی بیایند - بعد از قلیان و شربت روبروی هریک مجموعه یا دوری پر از حلویات و نقل و نان شیرمال و کلمیجه شیرین زمین گذارند - قدری بخورند و جای دیگر بروند - مرد و زن صاحب خانه مسلم و دست نروده را جدا و شکسته و ریزه را علیحده نمایند - باز هر که داخل شود لایق ریش او پیش آرند - راز تکه پارچه باقی مانده بدست و دهن فقرا و ایتام و اطفال نوالی می نهند - و این مرد خود هم به نوبه در خدمت هریک برای باز دید گردش میکند - که مدت یک هفته تا چهارروز باین کارها و مهمانی دره و رفتن تماشاگاه اوقات بخوشی می گذارد - تا بایران بودم من هم بهمین جنون دیوانه بودم - و در غربی هم بصورت بومی در پای رفاقت ایشان بسر میبردیم - ازین جهت گرمی بازار جمله اشیا بیحد و مداخل اهل حرفه لا تعد شده، فقیری نماد که یکدست جامه نوهم نرسانده باشد \*

2. Translate into English, writing explanatory notes on the under-lined words :— 20

سرای خاک هوس خانه مجانین است  
 دران مسلسل زنجیریان ملک جنون  
 حدیث عقل بر اولاد آدم افسانه است  
 بعاقلان جهان بین و را میپرس که چون  
 گمان عقل بران میبرد ز نوع بشر  
که الفنون جنون گفت و الجنون فنون  
ابو المجانین گر سو الدشر نبود چرا  
 برای مشتی گندم شد از بهشت برون  
 پدر نه تنها دیوانه بود مادر هم  
 و گر نه از دم شیطان چگونه خورد فسون  
 ز مادر و پدر اینچنین جنون انباز  
 شگفت نیست اگر زاد تا ابد مجنون  
 نژاد آدم دیوانگان مختلف اند  
 بارث برده جنون از دو سر کم و افزون

## SECOND HALF

Examiner—PROF. FIDA ALI KHAN

1. Translate into Persian A, and any one of B or C :—

50

The person as well as the mind of Constantine had been enriched by nature with her choicest endowments. His stature was lofty, his countenance majestic, his deportment graceful; his strength and activity were displayed in every manly exercise, and from his earliest youth to a very advanced season of life, he preserved the vigour of his constitution by a strict adherence to the domestic virtues of chastity and temperance. He delighted in the social intercourse of familiar conversation; and though he might sometimes indulge his disposition to raillery with less reserve than was required yet his friendship has been suspected; he shewed, on some occasions, that he was not incapable of a warm and lasting attachment.

## B

Of course the occasion would be made both more solemn and more historic if the King-Emperor were able to be present in person and could place the crown of all the Indians upon his own brow. Long ago, when we were first formulating our plans, I ventured to present this aspect of the case to His Majesty. The idea was most agreeable to him, and he would have greatly rejoiced to be able to carry it out. His love for this country has always been great, and I venture to affirm that he is as proud to be the first Emperor of all India as the late Queen Victoria was to be its first Empress. But the duties of State are too absorbing to permit his Majesty to be absent from England for so many weeks as would have been required, and he was compelled to desist from gratifying a wish that would otherwise have had for him the greatest attractions.

## C

The foreign history of this reign was chiefly distinguished by the danger which threatened the new sovereign of being involved in war with Abbas, king of Persia, the most powerful and warlike prince in Asia. Dow, following the native historians, represents this rupture between these two mighty potentates to have arisen from the error of a secretary, who addressed a letter, 'From the emperor of the world to the master of Persia'. On receiving the epistle thus directed, Abbas, it is said, rejected all explanation and apology, and instantly prepared for war. Such a mistake seems not very probable, much less that a monarch so distinguished for talent and policy, and now of mature age, should have engaged in so formidable a contest on a ground so trivial. Possibly he might use it as a pretext; and, seeing the throne of India filled by a prince not yet firmly seated, and rendered odious by the steps which had led to his elevation, might conceive the hope of making this important addition to his dominions.

## FIFTH PAPER

## FIRST HALF

*Examiner*—MAULVI SHAH KALIMUR RAHMAN, M.A.

*The questions are of equal value*

*Answer two questions from A and two from B*

## A

1. (a) Define and illustrate کنایة and استعاره .
- (b) Point out what kind of استعاره is used in the following lines :-

علما جمله ہرزہ می لافند  
 دین بر پائی ہر کسی بافند  
 چون تو بباغ بگذری گل نہ رسد بپوی تو  
 لیک رسد بقامتت سر اگر روانہ بود



2. Explain and illustrate the following figures of speech :—

طباق - ادماج - ترجیه - حسن - تعلیل - مبالغه - مشاکل - رجوع - مراعات النظیر \*

8. Name and define the chief varieties of poetical composition in Persian. Which of these is in your opinion the best of them, and why?

### B

4. Explain and illustrate the following terms :—

صد - حشر - فاصله - رتد - قافیه - رری

5. Briefly state and illustrate the rules observed in scansion regarding the insertion and the omission of the letters :—

یای and واو , الف

6. Scan the following lines and name the metre :—

(i) ای مرغ سحر عشق ز پرورانه بیامرز  
کان سوخته را جان شد ر آواز نیامد

(ii) آنکه نبات عارضش آب حیات می خورد  
درشکرش نگه کند هر که نبات می خورد

(iii) غزال ر غزل هر دو آن مر ترا  
نجسیم غزال ر نجسیم غزل

(iv) منم آن سحر بیان کز مدد طبع سلیم  
نبود ناطقه نام سخنم بی تعظم

### SECOND HALF

Examiner—PROF. A. SATTER SIDDIQUI, M.A., PH.D.

Answer ANY FOUR questions

The questions are of equal value

1. Give a short account of the pre-Islamic Persian literature.
2. Enumerate the various languages of Iran up to the first century of the Hijra, giving the chief characteristics of each of these languages.
3. Give ten Persian words with their philological equivalents in Sanskrit, explaining any differences between the equivalents.
4. Give six Arabic and six Turkish loan-words in Persian, tracing them to their original forms.

5. Explain the etymology of :—

گریبان - سکنجبین - تیزاب - شراب ناب - جوهر - ناف  
شیربرنج - کباب - تشنه - هفت - نشیب - دشمن \*

## SIXTH PAPER

### FIRST HALF

*Examiner—PROF. FIDA ALI KHAN*

*The questions are of equal value*

*Only THREE questions are to be attempted*

1. What made the Persians neglect their own literature almost entirely for nearly two centuries and a half after the conquest of Persia by the Arabs?
2. Trace the origin and growth of Persian poetry, examining critically all the legends relating thereto.
3. Name half a dozen of the earliest Persian prose works, describing the subject matter of each and giving a short account of the life of the authors.
4. Point out all the sources from which Firdausi has drawn the materials for his great epic and give a brief description of each of them.
5. Explain the characteristic features of the poetry of Minucihri which distinguish him from his contemporaries.

### SECOND HALF

*Examiner—PROF. A. KADIR, M.A.*

*The questions are of equal value*

*Answer ANY FOUR of the following*

1. Give an estimation of Thn-i-Yamin as a persian poet, and discuss at length the merits of his Qata'ât.
2. Point out the chief characteristics of Hafiz's ghazals, discussing in this connection the debt he owed to Khwaju and Salman.
3. 'Mulla Nuruddin Abdur-Rahman Jami ..... was one of the most remarkable geniuses whom Persia ever produced, for he was at once a great poet, a great scholar, and a great mystic.'

Criticise the above remark.

4. 'Qâ'âni is one of the most melodious of all the Persian poets, and his command of language is wonderful, but he lacks high aims and noble principles.'

Estimate the value of the above remark and give your own views with reasons.

- 5 Write a short history of the development of Drams in modern Persian

## SEVENTH PAPER

## FIRST HALF

*Examiner*—PROF. M. Z. SIDDIQUI, M.A., PH.D.

*The questions are of equal value*

1. Discuss the importance of the battle of 'Khandaq' and its effect on the history of Islam.

*Or,*

Describe and discuss the services of 'Umar I to the Islamic republic.

2. Describe the main achievements of 'Abdu'l-Malik, and determine his place among the Umayyad rulers.

*Or,*

Explain the easy conquest of Spain by the Muslims, and discuss the main causes of the downfall of the Muslim rule in that peninsula.

3. Name the founder of the Fatimide rule in Egypt, describe the main features of his character, and discuss the main causes of the easy conquest of Egypt by him.

*Or,*

Describe the character Salâhuddin the Ayyubide and discuss the causes of his success.

## SECOND HALF

*Examiner*—SIR ZAHID SUHRAWARDY, KT., M.A., B.L.

*Attempt ANY THREE of the following questions*

1. Give an account of the Ismaili sect—its origin and the part it played in the political history of Islam till its extirpation in 1256.

2. Describe the historical circumstances which attended the invasion of Persia by the Mongols and the campaigns of Halagu Khan.

3. Give an account of the most important kingdoms that arose from the disintegration of the Seljuk empire.

4. Describe the campaign of Aurangzib in the south from the time he left Delhi until his death. What precipitated it and how did it affect the subsequent history of India?

5. It is claimed that the British did not conquer India from the Muham-madans, whose power had already ceased to exist. Historically defend or refute the assertion.

## EIGHTH PAPER

## (ESSAY)

*Examiners*—{SIR ZAHID SUHRAWARDY, KT., M.A., B.L.  
PROF. M. Z. SIDDIQUI, M.A., PH.D.

*The figure in the margin indicates full marks*

Write an essay on any one of the following :—

100

(a) Babis and Bahais—their creeds and history.

(b) Mysticism in Persian Poetry.

(c) Journalism in Modern Persia.

(d) ملک آزادی و کنگ قناعت گنج ایست

که بشمشیر میسر نشود سلطانرا

## FRENCH

## FIRST PAPER

Examiner—DR. P. C. BAGCHI, M.A., D.LITT.

*The questions are of equal value*

*Answer any six out of the following*

1. It has been said by an eminent scholar that " the genius of the French language, descended from its single Latin stock, has triumphed most in the contrary direction—in simplicity, in unity, in clarity, and in restraint."

Show how far it is illustrated in the oldest remains of the French literature.

2. While discussing the decline of the *chansons de geste* in France, a French writer says—"We shall never know the harm which the Round Table has done to us." Discuss how far such a statement is justified.

3. Discuss the influence of the Renaissance on the development of the French Prose.

4. How far are the Society and Public life of the age of Louis XIV reflected in the letters of his times?

5. Describe the main features of the Romantic movement in French literature.

6. What do you know of the drama of the Romantic School?

7. Describe briefly the literary activities of the "*Maîtres du Parnasse*" and estimate the value of their contribution to the French literature of the Nineteenth Century.

8. It has been said that "Alphonse Daudait était le Dickens Français". How far can you justify such a statement?

9. What do you know of the *Ecole Symboliste*? Give a critical estimate of their contributions to modern French Poetry.

10. Write short notes on the following authors :—Verlaine, Valéry, Rimbaud and Paul Bourget.

## SECOND PAPER

Examiner—REV. FATHER E. POPULAIRE, S.J.

*The figures in the margin indicate full marks*

*Answer the two questions marked with asterisks and any two others from each part A and B; six in all*

\* 1. Translate the following extracts :—

20

- (a) Je te le dis encore, et quoique j'en soupire,  
 Jusqu'au dernier soupir je veux bien le redire:  
 Je t'ai fait un offense, et j'ai dû m'y porter,  
 Pour effacer ma honte et pour te mériter:  
 Mais quitte envers l'honneur, et quitte envers mon père.  
 C'est maintenant à toi que je viens satisfaire;  
 C'est pour t'offrir mon sang qu'en ce lieu tu me vois:  
 J'ai fait ce que j'ai dû, fais ce que je dois,  
 Je sais qu'un père most t'arme contre mon crime,  
 J'eû t'ai pas voulu dérober ta victime:  
 Immo avec courage au sang qu'il a perdu  
 Celui qui met sa gloire à l'avoir répandu.

- (b) Je sais que sur les vœux on n'a point de puissance,  
Que l'amour vent partout naître sans dépendance,  
Que jamais par la force on n'entra dans un cœur,  
Et que toute âme est libre à nommer son vainqueur :  
Aussi ne trouverous-je aucun sujet de plainte,  
Si pour moi votre bouche avait parlé sans feinte ;  
Et, rejetant mes vœux dès le premier abord,  
Mon cœur n'aurait eu droit de s'en prendre qu'au sort ;  
Mais d'un aveu trompeur voir ma flamme applaudie,  
C'est une trahison, c'est une perfidie  
Qui ne saurait trouver de trop grands châliements ;  
Et je puis tout permettre à mes ressentiments.
2. What are the peculiar circumstances which made the appearance of 'Le Cid' an event of first-rate importance in the history of French literature?—What was the impression created on Corneille's contemporaries. 15
3. Why is Racine looked upon as the great classical writer? What are the chief characteristics of his tragedy 'Audromaque'? 15
4. Contrast Corneille and Racine from the double point of view of literary style and the way of treating their subject. 15
5. Discuss the position of Molière in French literature. Compare the 'Misanthrope' with other comedies. 15

## B

- \* 6. Give an appreciation of the 'Grand Siècle', showing how this appellation is justified by the number, the genius and the productive activity of the various writers of prose and poetry. Was it equally successful in every branch of literature? 24
7. Give an estimate of the genius of Bossuet as an orator, a writer, a philosopher. 13
8. Write a note on La Bruyère and his chief work. Would you include him among the writers of the classical age? Justify your answer. 13
9. Give a historical sketch of the foundation of the 'Académie Française' and of the function it performed in the classical age. 13
10. Translate into English :— 13

Vit on jamais en deux hommes les mêmes vertus over des caractères si divers, pour ne pas dire si contraires? d'un paraît agir par des réflexions profondes, et l'autre par de soudaines illuminations; celui-ci par conséquent plus vif, mais sans que son fère eût rien de précipité; celui-là, d'un air plus froid, sans jamais rien avoir de lent, plus phardi à faire qu'à parler, résolu et déterminé au-dedans, lars même qu'il paraissait embarrassé au-dehors. é'un des qu'il parut dans les armées, donne une haute idée de sa valeur, et fait attendre quelque chose d'extraordinaire mais toutefois s'avance par ordre, et vient comme par degrés aux prodiges qui ont fini le cours de sa vie, l'autre, comme un homme inspiré, dès sa première bataille s'égale aux maîtres les plus consommés : l'un par de vifs et continuels efforts, emporte l'admiration du genre humain, et fait taire l'enire; l'autre jette d'abord une si vive lumière qu'elle n'osait l'attaquer : l'un enfin par la profondeur de son génie et les incroyables ressources de son courage, s'élève au-dessus des plus grands périls, et sait même profiter de toutes les infidélités de la fortune; l'autre, et pas l'avantage d'une si haute naissance, et par ces grandes pensées que le ciel envoie, et pas une espèce d'instinct admirable dont les hommes ne connaissent pas le secret, semble né pour entraîner la fortune dans ses desirs, et forcer les destinées.

## THIRD PAPER

*Examiner*—MR. NAGENDRA NATH CHANDRA, M.A.*The questions are of equal value**Total marks—50*

## FIRST HALF

*All questions carry equal marks**Answer any THREE of the following questions*

1. "La 'Legende des Siècles' suite de poèmes fabuleux dont la grandiloquence étincelles de beautés neuves comble une lacune dans l'histoire de la littérature française. C'est un cycle d'épopées où l'auteur a l'ambition d'enclorre tous les progrès de l'humanité. Cela commence avant le déluge et cela finit au delà du terme assigné au jugement dernier. Cette conception bizarre et souvent puérile fut heureusement l'occasion des plus prodigieuses réussites où la guerre de Victor Hugo ait triomphé.

How far is the above statement true with regard to Victor Hugo's "La Legende des Siècles,"

2. Summarise "Les Pauvres gens" by Victor Hugo and justify that this poem "a élevé la poésie des humbles à la hauteur de l'épopée."

3. Write a critical appreciation of Lamartine's poem "Jocelyn."

4. Reproduce in your own words the episode of the "Laboureurs" in Lamartine's "Jocelyn", and write a brief comment on it.

Narrate the story of Victor Hugo's "Le Cimetière d'Eylau" and explain the poet's views about war contained in this poem.

## SECOND HALF

*The questions are of equal value**Total Mark—50**All questions carry equal marks**Answer any THREE of the following questions*

1. Telle est l'histoire de cette femme qui n'est pas du monde au milieu du monde; qui faite pour être magnifiquement épouse et mère, n'a ni mari, ni enfants, ni famille."

Narrate in brief the story of Balzac's "Eugenie Grandet," and explain how far the above remark has been true in the case of Eugenie Grandet.

2. Compare and contrast Stendhal and Balzac as novelists.

3. It has been said that Anatole France "est moins un romancier proprement dit qu'un moraliste." Justify this remark so far as "Le Crime de Sylvestre Bonnard" is concerned.

4. Write a note on Daudet's style with special reference to his "Contes du Lundi."

5. Explain to what extent has Anatole France observed the rules of "Unity," in his "Le Crime du Sylvestre Bonnard."

## FOURTH PAPER

*Examiner*—DR. S. P. MUKHERJEE, M.A., PH.D.*The figures in the margin indicate full marks*

50

## 1. Translate into French :

(a) If Greek has great qualities, Latin has others, more suited, perhaps, to the nature of the French genius. The dignity, it has been said, of the Latin language is unequalled. It was spoken by the sovereign people, who stamped it with that character of grandeur that is unique in the history of human language. It is the language of civilisation. Mingled with the speech of our barbarian forefathers, it had the power to refine, to render supple to spiritualise those rude tongues which have become what we see. Take the map of the world and draw a line within which this universal language was spoken, it marks the limits of civilisation and of the European stock. The Latin language is the sign of the European. The Frenchmen of the Renaissance recognised this, and though they might have been unable to adduce the reasons just set forth, they were the reasons that induced them to return in a body to the Latin tradition after the brief and poetic enthusiasm for Greek by which they had been carried away for a moment. Simultaneously, they feel the need of putting the solidity, gravity and dignity of their matter on a level with the perfection of manner which they esteem they have achieved. I see curious evidence of this desire, in the naïve and pedantic coquetry with which they resort to inverted commas to draw the reader's attention every time they express a general idea.

(b) The Lear of Shakespeare cannot be acted. The greatness of Lear is not in corporal dimension, but in intellectual : the explosions of his passion are terrible as a volcano ; they are storms turning up and disclosing to the bottom that sea, his mind, with all its vast riches. It is his mind which is laid bare. This case of flesh and blood seems too insignificant to be thought on ; even as he himself neglects it. On the stage we see nothing but corporal infirmities and weakness, the importance of rage ; while we read it, we see not Lear, but we are Lear,—we are in his mind, we are sustained by a grandeur which baffles the malice of daughters and storms ; in the aberrations of his reason we discover a mighty irregular power of reasoning, immethodised from the ordinary purposes of life, but exerting its powers, as the wind blows where it listeth, at will upon the corruptions and abuses of mankind. What have looks or tones to do with that sublime identification of his age with that of the heavens themselves, when, in his reproaches to them for *conniving* at the injustice of his children, he reminds them that they themselves are old ? What gesture shall we appropriate to this ? What has the voice or the eye to do with such things ?

(c) Beautiful art can only be produced by people who have beautiful things about them, and leisure to look at them ; and unless you provide some elements of beauty for your workmen to be surrounded by, you will find that no elements of beauty can be invented by them. .... On each side of a bright river he saw rise a line of brighter palaces, arched and pillared, and inlaid with deep red porphyry and with serpentine. Opening on each side from the river were gardens, courts and cloisters ; long successions of white pillars among wreaths of vine ; leaping of fountains through buds of pomegranate and orange ; and still along the garden paths, and under and through the crimson of the pomegranate shadows, moving slowly, groups of the fairest women that Italy ever saw—fairest, because purest and thoughtfulest ; trained in all high knowledge, as in all courteous art—in dance, in song, in sweet wit, in lofty learning, in loftier courage, in loftiest love—able alike to cheer, to enchant, or save the souls of men.

2. Write an essay on one of the following subjects :

50

(a) The Renaissance in France.

(b) The Romantic movement in French literature.

(c) French Literature embodies in words the dreams of the French people, as their laws embody their ideals of life.

### FIFTH PAPER

*Examiner*—REV. FATHER VERBOCKHAVEN, S. J.

*The figures in the margin indicate full marks*

*The questions are of equal value*

*Write the answers to the two halves in separate books*

### FIRST HALF

#### Poetry

*Answer only THREE questions, including the last*

1. Translate and answer the annexed question :—

10

Plus l' amoureux pasteur sur un tronc adossé,  
Enfant son flageolet à quatre trous percé,  
Son matin à ses pieds. à son flanc la houlelte,  
Ne dira plus l'ardeur de sa belle Janette ;  
Tout deviendra tunit, Echo sera sans voix ;  
Tu deviendras compagne et, en lien de tes bo is  
Dont l'ombrage incertain lentement se remue,  
Tu sentiras le soc, le coutre et la charme ;  
Tu perdras ton silence, et satyres et Pans,  
Et plus le cerf chez toi ne cachera ses fans.

Adieu, vieille forêt, le jouet de Zéphire,  
Où premier j' accor dai les langues se ma lyre,  
Où premier j'entendis les flèches résonner  
P' Apollou, qui me vint tout le coeur étonner ;  
Où premier, admirant ma b'elle callièrre,  
Je devins amoureux de sa neuvaïne trope,  
Quand sa main sur le front cunt zoses ma jeta,  
Et de son propre lait Euterpe m'alluita.

RONSARD.

What is the meaning of the proper names *Satyres, Pans, Zephire, Apollou, Calliope, Euterpe*, and how is it that they come in the description of a forest ?

5

2. Translate, and answer the annexed question :—

10

Hé ! Dieu que je porte d'euire  
Aux plaisirs de Ta douce vie,  
Alouette, guide l'amour  
Caquettes dès le point du jour,  
Secouant en l'air la rosée  
Dont ta plume est toute arrosée !  
Devat que l'hébus soit levé,  
Tu enlives ton corps lavé



Pour l'essuyer près de la nue ;  
 Trémoussant d'une aile menue  
 Et te sourdant à petits bonds,  
 Tu dis en l'air de si doux sons  
 Composés de ta tirel're,  
 Qu'il n'est amant qui ne désire,  
 Tioyant ch'anter au zenouveau,  
 Comme toi devenir oiseau.

RONSARD.

Explain grammatically the three questions occurring in this stanza, 5  
 and summarize the stanza in one sentence, in French.

3. Translate :—A vous, troupe légère, 10

Qui d'aile passagère  
 Par le monde volez,  
 Et d'un siffant murmure  
 L'ombrageuse verolure  
 Poucement ebranlez :  
 J'offre ces violettes  
 Ces lis et ces fleurettes,  
 Et ces roses ici,  
 Ces vermeillites rosses,  
 Tout fraîchement écloses,  
 Et c's ceillels aussi.  
 De votre douce haleine  
 Eventez cette plaine,  
 Cependant que j'ahane  
 A mon blé que je vaine  
 A la chaleur du jour.

DU BELLAY.

What does that poem tell you about the literary qualities of Du-Bellay? 5

4. Translate :—Avril, la grâce et le ris 10

De Cypris.  
 Le flair et la douce halème ;  
 Avril, le parfum des dieux  
 Quides cieux  
 Sentent l'odeur de la plème.  
 C'est toi courtois et gentil  
 Quid'exil  
 Retère ces passagères,  
 Ces bizoudelles qui vont  
 Et qui sont  
 Du printemps les messagères.....  
 Mai vautera ses fraîcheurs,  
 Ses frients meurs  
 Et sa feudoûdo rosée,  
 La maune et le jne drux  
 Le unel roux  
 Pouk sa grace est arrosée.  
 Mais moi jé donne moi voix  
 A ce mois,  
 Qui preud le surnam de celle  
 Qui de l'écumeuse mei  
 Vit germer  
 Sa maissance maternella.

BEJLEAU.

Show how mythological juvenirs are mixed up here with personal 5  
 experience of nature. Do you consider this mixture an obstacle or a help  
 to true poetry ?

5. (a) What was "La Pleiade" ? What do you know of its programme 20  
 concerning the "Défense et illustration de la Langue française." ?

(b) Point out the literary questions and defects of Pierre de Ronsard.

## SECOND HALF

## Prose

*Answer only three questions, INCLUDING THE LAST.*

## 1. Translate :—

15

Quasi qu'ils disent, en la vertu même, le dernier, but de notre visée, c'est la volupté. Il me plaît de bathe leurs oreilles de ce me, qui leur est si fort à contre cœur : et s'il signifie quelque suprême plaisir et excessif contentement, il est mieux dû à l'assistance de la vertu qu' à nulle autre assistance. Cette volupté, pour être plus gaillarde, verveuse, robuste, virile, n'en est que plus sérieusement voluptueuse. Et lui devons donner le nom duplaisir, plus favorable, plus doux et naturel que celui de la vigueur, duquel nous l'avons dénommée. Cette autre volupté plus basse, si elle méritait ce beau nom ce devait être en concurrence, non par privilege. Je la trouve moins pure d'incommodités et de traverse qui vi est la vertu. Outre que son goût est plus momentanée, fluide et caduque, elle a ses virilles, ses jeûnes et ses travaux, et la fueur, et la sang, et en outre particulièrement ses passions tranchantes de tant de vertes ! et à son côté une satiété si lourde qu'elle l'iquipolle à pénitence.

## 2. Translate :—

15

Oz, j'ai pensé souvent d'où venait éla, qu' aux guerres levisage de la mort, soit qui nous le voyous en nous ou en autrui, nous semble sans comparaison moins effroyable qu' en nous maisons : autrement ce seriat une armée de médecins et de pleureurs : et elle itant toujours und, qu' il y ait toutefois beaucoup plus d'assurance parmi les gens de village et de basse condition qu' à nutres. Je crois à la vérités que ce sont ces minees et apparts effroyables, de quai nous l'entourous, quinous fort plus peur qu'elle : une toute nouvelle forme de vivre, les cris des meres, des femmes et des enfants, la visitation des person nes Etounées et transies, l'assistance d'un nombre de valets pâles et éplorés, une chambre sans jour, des cierges allumés, notre chevet assiégé de médecins et de prêcheurs, somme, tout horreur et tout effroy autour de nous. Nous voilà déjà ensevelis et enterrés. Les enfants ont yeur de leurs amis mêmes quand ils les voient masqués : aussi avons-nous. Je faut oter le masque aussi bien des choses que des personnes. Oté qu' il sera, nous ne trouverons au-dessous que atte même mort qu'un valet ou simple chambrierè passèrent dernièrement sans peur. Heureuse la mort qui ate le loisir aux apprêts de tel equipage !

## 3. Translate :—

15

Encore quil ne soit pas nouveau de voir croître la mut des cornes à tel qui ne les avait pas en se couchant, toutefois l'événement de cippus, roi d'Thalie, est mémorable ; le quel, pour avoir assiste le jour, avec grande affection, au combat des tauresuso, et avoir eu en songe toute la nuit des cornes en la tête, les produisit en son front par la force de l'imagination. La passion donna au fite de croesus la voix que la nature lui avait refusée Et Antiochus prit l'a fièvre, par la beauté de stratonice trop vivement empreinte en son âme. Plenè dit avoir vu Lucius Cossicius de femme changé in homme le jour de ses noces. Pontanus et d'autres en content paralles métamorphoses advenues en Italiè ces siècles passés....Les uns attribuent à la force de l'imagination les cicatrices du Roi Dagobert et de saint François. On dit queles corps s'en enlèvent telle fois de leur place. Et celous récite d'un prêtre qui ravisait son âme en telle extase, que le corps en demeurait longue espace sans respiration et sans sentiment.

## 4. Translate :—

15

Les histories que j'emprunte, jè les zenvois sur la conscience de ceux de qui jè le s prends le s discours sont à moi et se tieuent par la preuve de la

raison, non de l'expérience; chacun peut joindre ses exemples: et qui n'en a point, qu'il ne laisse pas de croire qu'il en est assez, vu le nombre et variété des accidents. Si j'en comme bien, qu'un autre comme pour moi.

Aussi, en l'étude que je traite, de nos mœurs et mouvements, les témoignages fabuleux, pourvu qu'ils soient possibles, y servent comme les vrais. Advenu ou non advenu, à Rome ou à Paris, à Jean ou à Pierre, c'est toujours un tour de l'humaine capacité: duquel je suis utilement avisé par ce récit. Je le vois et en fais mou profit, également en ombre qu'en corps. Et aux diverses façons qu'ont souvent les histoires, je prends à me servir de celle qui est la plus rare et mémorable. Il y a des auteurs desquels la fin c'est dire les événements. La mienne, si j'y savais advenir, serait dire sur ce, qui peut advenir. Il est justement permis aux Ecoles de supposer des similitudes, quand elles n'en ont point. J'en fais pas ainsi pourtant et surpasse de ce côté-là en religion superstitieuse toute, foi historique. Aux exemples que je tire céans, de ce que j'ai lu ouï, fait ou dit, je me suis défendu d'oser altérer jusques aux plus légères et inutiles circonstances: ma conscience ne falsifie pas un iota, mon inscience, je ne sais.

5. A. Out of the above extracts, from the *Essais*, select passages showing more aptly the characteristics of Montaigné and comment on them. 20

B. Either. Compare the similarity or the difference that exists between the philosophical ideas of Montaigné and those of Rabelais and Calira.

Or, Compare the educational ideas of Montaigné with those of Rabelais.

## SIXTH PAPER

### GROUP A

Examiner—DR. P. C. BAGCHI, M.A., D.LITT.

*The questions are of equal value*

*Answer any six out of the following questions*

1. Show how far the most important feature of Rousseau's ideal of education can be characterised as the "precepte d'éducation négative".

2. How far is the character of Rousseau's own acquaintances reflected in his *Sophie*?

3. Show how far the following observation about Voltaire's *Candide* is justified: "Cette merveille de bonne humeur désespérante formait avec les poèmes de la *Loi Naturelle* et du *Désastre de Lisbonne* une trilogie dont le dessein n'était pas apparemment de rendre les hommes contents de leur condition et du gouvernement de la Providence ni même de leur inspirer du respect et du goût pour leurs semblables".

4. Show how far *Le siècle de Louis XIV* is an interpretation of a particular period of history of France in the light of the idea of religious toleration.

5. Determine the place of André Chenier amongst the poets of the Eighteenth Century.

6. What do you know of André Chenier's personal history? What part did he play during the French Revolution? How far are his views on the Revolution reflected in his poems.

7. Compare Rousseau and Voltaire with a view to bring out how far their works were instrumental in preparing the French people for the Revolution.

8. Develop :

"En fait de doctrine poétique comme en fait de vocabulaire et de grammaire Voltaire est l'intolérance même".

9. Explain after Rousseau :

Maître corbeau, sur un arbre perché,  
Tenoit dans son bec un froumage.  
Maître renard, par l'odeur alléché,  
Lui tint à-peu-près ce langage :  
Eh ! bonjour, monsieur le corbeau !  
Que vous êtes joli ! que vous me semblez beau !  
Sans mentir, si votre ramage  
Répondoit à votre plumage,  
Vous seriez le phénix des hôtes de ces bois.

10. Describe the main characteristics of Rousseau's Prose Style.

## SEVENTH PAPER

### FIRST HALF

*Examiner*—REV. F. WEAVER, S.J.

*The questions are of equal value*

*Answer any THREE questions*

1. Translate :

"L' Italie, aux jours de sa puissance revit tout entière dans le Dante. Animé par l'esprit des republiques, guerrier aussi bien que poète, il souffle la flamme des actions parmi les morts, et ses ombres ont une vie plus forte que les vivants d' aujourd'hui. Les souvenirs de la terre les poursuivent encore ; leurs passeons sans but s'acharnent à leur coeur ; elles s' agitent sur le passé, qui leur semble encore moins irrévocable que leur éternel avenir. On dirait que le Dante, banui de son pays, a transporté dans les regions imaginaires les peines qui le dévoraient. Ses ombres demandent sans cesse des nouvelles de l'existence. Comme le poète lui-même s'informe de sa patrie, et l'enfer s' offre à lui sous les couleurs de l'exil. Tout à ses yeux se revêt du costume de Florence. Les morts qu'il évoque semblent renaître aussi Toscaus que lui ; ce ne sont point les bornes de son esprit, c'est la force de son âme qui fait entrer l'univers dans le cercle de sa pensée."

2. How far are Mme. de Staël's own life and character portrayed in '*Corinne*' ?

3. " It contains but two characters, no scenery, and there is not a single fortuitous incident in the whole course of its action. Everything occurs according to natural laws. The reader follows the history of two souls to its close much as a student of Chemistry watches the fermentation of two substances in an inexplorable phial and observes the result." Discuss this statement about Benjamin Constant's "*Adolphe*" and point out what makes up for the unpretentiousness of the story.

4. Give a short account in French (about 200 words) of the story of "*René*"

5. *René*, *Corinne* and *Adolphe* all depict a period of uneasy search after new standards in literature and social and religious life. Amplify this statement.

## SECOND HALF

*The questions are of equal value**Answer any THREE questions*

## 1. Translate :

"L'automne me surprit au milieu de ces incertitudes : j'entrai avec ravissement dans les mois des tempêtes. Tantôt j'aurais voulu être un de ces guerriers errant au milieu des vents, des nuages et des fantômes ; tantôt j'enviais jusqu'au sort du pâtre que je voyais ré-chauffer les mains à l'humble feu de broussailles qu'il avait allumé au coin d'un bois. J'écoutais ses chants milan-choliques, qui me rappelaient que dans tout pays le chant naturel de l'homme est triste, lors même qu'il exprime le bonheur. Notre cœur est un instrument incomplet, une lyre où il manque des cordes, et où nous sommes forcés de rendre les accents de la joie sur le ton consacré aux soupirs."

2. Show from the characters of Oswald and d'Erfeuil Mme. de Staël's insight into French and English natural prejudices.

3. Constant himself thus expresses the moral of his book *adolphe* : "The strongest passion cannot survive the struggle with the established order of things. Society is too powerful. It makes that love too bitter which it has not recognised and stamped with the seal of its approval." Show from your knowledge of the story whether this is the case or not.

4. Write an appreciation of either Chateaubriand or Mme. Staël's powers of describing natural beauty.

5. What permanent effect have Chateaubriand, Mme. de Staël and Benjamin Constant had on later French and European literature. Refer especially to the contribution made by the three prescribed books.

## EIGHTH PAPER

## FIRST HALF

*Examiner—MR. J. BUFFARD**The questions are of equal value**Answer only THREE questions*

1. Distinguish 'langue d'oc' from 'langue d'oïl,' and enumerate the principal dialects of each.

2. Comment briefly on the statement : 'Popular words are natural, learned words artificial,'—and state clearly, with examples, the various steps which characterise the passage from Latin into French popular words.

3. 'Old French was originally a semi-synthetic language, half-way between synthetic Latin and analytic Modern French,'—Explain this statement.

4. Explain historically the form of the adjective 'grand' with such words as *mère*, *faim*, *zoute*.

5. Make out a list of words to illustrate the transposition, addition, and subtraction of letters in derived words.

SECOND HALF

*The questions are of equal value*

*Write the answers to the two halves in separate books*

*Answer only THREE questions*

1. Give a rapid survey of the great changes which French has undergone from its Latin origin down to the present day.
2. Write a brief note on the revolution in the system of conjugation during the change from Latin into French; and give a few examples of living and dead conjugations.
3. Write a short account of the history of words, and indicate the causes that determine changes in the meaning of words.
4. Enumerate the causes leading to the destruction of words, and show how the disappearance of words is effected.
5. Discuss the influence of German on French at the time of the Frankish invasion of Gaul.

INDIAN VERNACULARS—BENGALI

HISTORY OF BENGALI LITERATURE

FIRST PAPER

FIRST HALF

Examiner—RAI BAHADUR PROF. DINESH CHANDRA SEN, B.A.,  
D.LITT.

*Attempt ANY THREE questions*

*Answers may be written either in English or in Bengali*

1. Show from the evidences found in old Bengali literature that the Ape-god Hanuman, now inseparably connected with the Rāma legend, did not originally belong to the Rāma cult, and that the northern and southern legends were probably blended together to form the basic source of the Rāmāyana at a later stage.
2. Contrast Bharat Chandra with Mukunda Ram, stressing the respective merits of their poetry, style of composition, and the standards of their ethics and poetics.
3. What parts did the Bengali Musalmans play, as patrons of old Bengali literature, as writers of lyrics, classical poems, ballads, and folk songs?
4. State all that you know about any two of the following writers :—
  - (a) William Carey.
  - (b) Mrityunjay Tarkelankar.
  - (c) Ram Ram Basu (author of Pratapaditya's life).
  - (d) Ram B<sup>asu</sup> (Kabiwālā).
5. It is supposed that the advent of Chaitanya was mainly responsible for the decay of the folk-literature of Bengal. Give your views on this question.

## SECOND HALF

*Examiner*—RAI BAHADUR KHAGENDRA NATH MITRA, M.A.

*Not more than THREE questions to be attempted*

1. Who is, in your opinion, the greatest Vaishnava poet of the post Chaitanya period? Give reasons for your answer.

2. Give a short account of Brindaban Das and his times.

3. Give a bird's eye view of the Vaishnava biographical literature of the sixteenth century?

4. What are the subjects treated in the *Premā-vilāsa* and *Narottama-vilāsa*? Give accounts of the reformation of Bir Hambir, Chand Ray, and the Brahmin scholars of the Court of Nrsingha-Raja of Pakkapalli.

5. Write short notes on :—

(1) Rāgānugā Bhakti.

(2) Mahābhāva.

(3) Gaura-chandrikā.

(4) Manohar-Shāhī.

## SECOND PAPER

## FIRST HALF

*Examiner*—MR. MANINDRAMOHAN BOSE, M.A.

*The questions are of equal value*

*Answer either Q. 1 or Q. 2, and ANY TWO of the rest*

Render into modern Bengali, adding notes where necessary :—

আলিএ কালিএ বাট কুঙ্কলা ।  
 তা দেখি কাহ্নু বিমন ভইলা ॥  
 কাহ্নু কাঁই গই করিব নিবাস ।  
 জো মনগোঅর সো উআস ॥  
 তে তিনি তে তিনি তিনিহো অভিন্না !  
 ভগই কাহ্নু ভবপরিচ্ছিন্না ॥  
 জে জে আইলা তে তে গেলা ।  
 অবণাগবণে কাহ্নু বিমন ভইলা ॥  
 হেরি সে কাহ্নি গিঅড়ি জিনউর বটুই ।  
 ভগই কাহ্নু যো হিঅহি ন পইসই ॥

Or,

মণ তরু পাঞ্চ ইন্দি তনু সাহা ।  
 আসা পাত বহল ফলাহা ॥

বরগুরুবরণ কুঠারে ছিজঅ ।  
 কাহ্ন ভগই তরু পুণ ন উইজঅ ॥  
 বাঢ়ই সো তরু স্তভাস্ত পানী ।  
 ছেবই বিহজন গুরুপরিমানী ॥  
 জো তরু ছেব ভেবউ ন জাগই ।  
 সড়ি পড়িআ রে মূঢ় তা ভব মাগই ॥  
 স্নন তরু গঅণ কুঠার ।  
 ছেবহ সো তরু মূল ন ডাল ॥

2. Explain fully with reference to the context :—

কাল কাহ্নাঞি মাধাতে বোডাচুলে ।  
 এহি চিহ্নে কাহ্নাঞি কে চাইহ গোকুলে ॥  
 স্নগন্ধ চন্দনে বড়ায়ি লেপিআ গাএ ।  
 করৈ করতাল মধুর বাণী বাএ ॥ -  
 নেত ধড়ী শিকি আশু পাছু লাষাএ ।  
 চরণে নুপর রুণুগু কাঢ় রাএ ॥  
 বৃন্দাবনে কাহ্নাঞি চাইহ ভাল মতে ।  
 গুরুগণে চড়ে কাহ্ন নানা ফল খাইতে ॥  
 হাথত লগুড় বাণী বাএ সে সুরঙ্গে ।  
 তথা চাইহ নারদ মুনি সঙ্গে ॥

Or,

পরানে না মার মোরে দেব গদাধরে ।  
 তিরিবধ ভয় কেহ্নে নাহিক তোক্ষারে ॥  
 সপনে গেআনে মনে তোক্ষাক চিস্তিলৌ ।  
 তার ফল ভাল কাহ্নাঞি তোক্ষা হইতে পায়িলৌ ।  
 হেন মনে পরিভাব জগত ইশর ।  
 আক্ষাক পরানে মাইলে কি লাভ তোক্ষার ॥  
 আমুগতী ভকতি অনাধি আশ্বিন নারী ।  
 তভৌ কেহ্নে আক্ষা পরিহরহ মুরারী ॥  
 ভাঁগিল সোনার ঘট যুড়ীবাক পারী ।  
 উত্তম জনের নেহা তেহেন মুরারী ॥

3. Criticise or justify the statement that Kṛṣṇa-Kīrtana is a work of the pre-Chaitanya period.

4. Comment on the language of the Caryyāpadas, with your opinion about the approximate date of their composition.

5. Indicate how the themes of *Pūrvarāga* and *Viraha* have been treated in the Kṛṣṇa-Kīrtana.



## SECOND HALF

Examiner—MR. BASANTARANJAN RAY, M.A.

The figures in the margin indicate full marks

Answer Q. 5 and ANY TWO of the rest

1. Show that Behulā represents the ideal woman and Chānd is the best specimen of manhood, as depicted in Manasā-Māṅgalā. 12½
2. What supernatural elements do you find narrated either in the Gopichandrer Pāñchālī or in the Gorakṣa-Vijaya? What effects do they produce, and how have they been identified with religious beliefs? 12½
3. Give an account of all the Gurus of the Nātha-cult, as you find them mentioned in Gorakṣa-Vijaya and Gopichandrer Pāñchālī. 12½
4. Explain fully :— 12½

জখনে হলই রাজা মীন অধিকারী ।  
 ভালমতে নাহি দেখি জোগি দেসান্তরি ॥  
 পরদেসী জোগি পাইলে লইয়া জাএ ধরি ।  
 দক্ষিণ পাটনে নিয়া তারে পালাএ মারি ॥  
 জথ য়েতা জোগি নিয়া পালাইল কদলি ।  
 ঘেণায়ে না খাএ তারে সকুনি ছিকালি ॥  
 বুড়া জোগি পাইলে চোপাড়ে ভাঙ্গে গাল ।  
 গাভুর জোগি পাইলে তুলিয়া দেন সাল ॥  
 অধবস জোগি পাইলে মৈধ্য দেসে কাটে ।  
 পোলা জোগি পাইলে পাটাত তুলি বাটে ॥

5. Give in your own words the substance of the following with explanatory word-notes wherever necessary :— 25

(a) অপণে রচি রচি ভবনিবঁণা ।  
 মিছে লোঅ বন্ধাবএ অপনা ॥  
 অস্তে ন জানঁহু অচিস্ত জোই !  
 জাম মরণ ভব কইসণ হোই ॥  
 জইসো জাম মরণ বি তইসো ॥  
 জীবন্তে মঅলৈ নাহি বিশেসো ॥  
 জাএথু জাম মরণে বিসঙ্কা ।  
 সো করউ রস রসানের কংখা ॥  
 জে সচরাচর তিঅস ভমন্তি ।  
 তে অজরামর কিম্পি ন হোন্তি ॥  
 জামে কাম কি কামে জাম ।  
 সরহ ভণতি অচিস্ত সো ধাম ॥

- (b) নীল জলদসম কুন্তল ভারী ।  
 বেকত বিজলি শোভে চম্পক মালা ॥  
 শিশত শোভএ তোর কামসিন্দূর ।  
 প্রভাত সময়ে যেন উয়ি গেল সুর ॥  
 ললাটে তিলক য়েহু নব শশিকলা ।  
 কুণ্ডলমণ্ডিত চারু শ্রবণযুগলা ॥  
 বিশ্বফল জিনি তোর অধবের কলা ।  
 মাণিক জিনিআ তোর দশন উজলা ॥  
 বোলকলা সংপূর চন্দ্রবদন ।  
 বেকত আমৃত তোর মধুর বচন ॥  
 মধুর গমনে বাসি ভাগিবার ডরে ।  
 তা দেখিআ বনবাস লৈল করীবরে ॥  
 অমর পুরত নাহি হএ হেন রামা ।  
 বিধি কৈল জঙ্গমে কনক প্রতিমা ॥  
 দেবাসুরেঁ মহোদধি মধিল তোন্ধারে ।  
 গাইল বড়ু চণ্ডীদাস বাসলী বরে ॥

### THIRD PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Examiner*—DR. TAMONASHCHANDRA DASGUPTA, M.A., PH.D.

*Candidates are required to give their answers in their own words  
 as far as practicable*

1. Answer *two* of the following questions, including number (i), 26  
 and give illustrations in support of your answer :—

- (i) Give a brief survey of the type of literature to which the Chandi Kāvya belongs—its genesis and influence on Bengali life.
- (ii) 'The Chandi Kāvya is mirror of contemporary Bengal.' Discuss.
- (iii) What is the place of the Jyotsnasingh ballads in Bengali literature?
- (iv) Discuss the lyric, epic, and dramatic elements in the East Bengal ballads.

2. Explain *any four* of the following passages with reference to 16  
 the context and commenting upon the phraseology :—

- (a) সাজুতী সন্দরী কড়া কান্দে ধাপাইয়া মাথা ।  
 • রাকসে হরিল যেমন জঙ্গলার সীতা ॥

- (b) চক্ষের কাজল কত্যা ঠাই গুণেতে কালী ।  
শিরেতে বাকিয়া লইলে কলঙ্কের ডালি ॥
- (c) আবে করে ঝিলিমিলি সোণার বরণ ঢাকা ।  
প্রভাতকালে আইল অরুণ গায়ে হলুদমাখা ॥
- (d) সোণার তরুয়া বন্ধু একবার পেখ ।  
আমার চক্ষু তুমি নিয়া নয়ান ভইরা দেখ ॥
- (e) ঔষধ সাধিয়া দ্রুত দিলেন কপালে ।  
দ্রুতযোগে ললাট-নয়নে অগ্নি জ্বলে ॥
- (f) সুর নাগ নর দেবা                      করয়ে তোমার সেবা  
কেহ না'হ অধোগতি হয় ।  
না দেখি এমন সৃষ্টি                      চাঁদ হৈতে বিষ-বৃষ্টি  
চন্দন প্রসবে ধনঞ্জয় ॥
- (g) সোণা রূপা নহে বাপা এ বেঙ্গা পিতল ।  
ঘষিয়া মাজিয়া ব'পু করেছ উজ্জল ॥
- (h) মূনির হইল মতিভ্রম হাতীর খসে পা ।  
ঘাটে আস্তা বিনা ঝড়ে ডুবে সাধুর না ॥

3. Give, in idiomatic Bengali, the substance of any story from the Mymensingh Gitikā which bears an affinity with any other story in literature.

## SECOND HALF

Examiners—MR. SAILENDRANATH MITRA, M.A.

1. Answer two of the following questions, including number (iii), and give illustrations, in support your answer :—

26.

- (i) Give correct estimate of the contribution of either the মেঘনাদবধ or the বৃত্তসংহার to Bengali literature.
- (ii) Attempt a comparative study of Madhusudan and Rabindranath as poets, commenting on the new departure each has made in respect of diction and poetic imagination.
- (iii) To what end has Girichandra employed the Fool and the Wit in his প্রকল্প and how do they help the progress of the plot?
- (iv) Describe Rabindranath as a poet of 'the Unknown', so far as can be gathered from the বলাকা.

2. Explain, with reference to the context, any four of the following extracts, pointing out allusions, figures of speech, or traces of influence, where necessary :— 16

- (a) উল্লাসে শুধিলা  
অশ্রুবিন্দু বহুধরা, শুবে শুক্তি যথা  
যতনে, হে কাদষিনি, নয়নাধু তব—  
অমূল্য মুকুতাফল ফলে যার গুণে,  
ভাতে যবে স্বাতী সতী গগনমণ্ডলে ।
- (b) হায় লো সজ্জন,  
দিন দিন হীন-বীৰ্য্য রাবণ হৃদয়তি,  
ষাদঃ-পতি-রোধঃ যথা চলোন্নি-আঘাতে !  
শুনি চমকিবে তুমি ।
- (c) যুগু নাটি করি তপ কত কল্পকাল,  
গঙ্গাধরে তুষ্ট করি অভীষ্ট লাভিহু,  
সিদ্ধ হৈহু শিব-বরে খ্যাতি ত্রিভুবনে—  
সে সৌভাগ্য-শিখা এবে হবে কি নির্দোষ ?
- (d) বালিবন্দ যথা নিত্য রেণু-পরিমাণে  
বাড়ে দিবা-বিভাবরী, সাগরগর্ভেতে,  
ক্রমে স্তূপ—দ্বীপাকার—ক্রমশঃ বিস্তৃত  
বৃহৎ বিপুল দেশ তরু-গিরিময়,  
ভেমতি এ নরকুল উন্নত সদাই ।
- (e) ঘুচাও মনভ্রান্ত লক্ষ্মীকান্ত নারায়ণ ।  
তোমার লক্ষ্মীরূপা কোন রমণী  
কল্পিণী কি কমলিনী,  
চিন্তামণি কর চিন্তা নিবারণ ॥

(f) তুমি কাঞ্চন ফেলে কাঁচে গেরো দিয়েছ, মান খুইয়ে প্রাণের  
দরদ করেছ.....সে শাস্তি আজ বিদায় দিয়েছি, আর  
কিরবে না, বিশ্বাস ভঙ্গ করে তার দোর খুলে দিয়েছি ।

- (g) দেহযাত্রা মেঘের খেয়া বাওয়া,  
মন তাহাদের ঘূর্ণী-পাকের হাওয়া ;  
বেকে বেকে আকার ঐকে ঐকে  
চলচে নিরাকার ।

(h)

তাই ত আমি জানি

আমি বাগীর সাথে বাগী,

আমি গানের সাথে গান,

আমি প্রাণের সাথে প্রাণ,

আমি অন্ধকারের হৃদয়-ফাটা

আলোক জলজল ।

8. Elucidate, in your own Bengali, the central idea of any one of the following passages :—

(a)

চিন্তামণি—কভু এলোকেশী, উলঙ্গিনী ধনী,

বরাভয়করা, ভক্তমনোহরা

শব পরে নাচে বামা !

কভু ধরে বাঁশী, ব্রজবাসী বিভোর সে তানে ।

কভু রজত ভূধর, দিগধ্বর, জটাজুট শিরে,

নৃত্য করে বব বম্ বলি' গালে ।

কভু রাসরসময়ী প্রেমের প্রতিমা,

সে রূপের দিতে নারি সীমা ।

কভু একাকার, নাহি আব কালের গমন,

নাহি হিলোল কল্লোল—স্থির, স্থির সমুদ্র ।

নাহি—নাহি “ফুরাইল” বাক্—

বর্তমান বিরাজিত ।

(b) নিষ্কম্প দীপশিখার ত্রায় মন । শুনেছি সেই আনন্দের অবস্থা ।  
কিছু একি সম্ভব ? কখননা—কল্পনা যাত্র, প্রলোভন বাক্য ! সুখ দুঃখ  
প্রবল প্রতিদ্বন্দ্বী, বায়ুসংঘর্ষণে ঘোরতর ঘূর্ণবায়ু উপস্থিত হয় । দীপনির্কীর্ণ  
সম্ভব । নিষ্কম্প দীপ অসম্ভব । .....এ দীপ নির্কীর্ণ হবে—মৃত্যুতে  
কি জ্ঞানদীপ নির্কীর্ণ হবে ? অসম্ভব । জড়েরই পরিবর্তন—জড়েরই  
ধ্বংস । চৈতন্ত্যের বিনাশ । কল্পনা করা যায় না । বিপদ—ঘোর বিপদ—  
অনন্ত বিপদ ! একি ? এ কি আভাষ ? আত্মত্যাগ ! নূতন কথা,—  
নূতন কথা । আপনার জগতই সব, আপনার জগতই যজ্ঞনা ! আত্মত্যাগ  
সম্ভব ! সম্ভব ॥ সম্ভব !!!

## FOURTH PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiner*—MR. PRIYARANJAN SEN, M.A.

Write an essay on one of the following subjects:—

50

- (a) Banikmchandra's attitude towards Western influence, with special reference to his *Kamalākānter Daptar* and critical essays.
- (b) Western influence in Rabindranath's early novels.
- (c) Nature in Bengali literature as influenced by Western thought.

## SECOND HALF

*Examiners*—{ DR. S. K. DE, M.A., D.LITT.  
DR. D. C. SEN., B.Sc., D.LITT.*Attempt only ONE question in the form of an essay*

50

1. Discuss generally the contribution of the Pundits and Munshis of the Fort William College to the development of Bengali prose in the first quarter of the 19th century.

2. Characterise the prose style of any two of the following writers, and estimate their influence on the development of Bengali prose in the 19th century: Rām Mohun Roy, Peary Chand Mitra, Isvar Chandra Vidyasagar and Aksay Kumar Datta.

3. Discuss the influence of the early Bengali Prose Tale and Essay on the prose style of the period 1800-1857.

## INDIAN VERNACULARS—ASSAMESE (SUBSIDIARY)

## FIFTH PAPER

*Examiner*—MR. M. M. BOSE, M.A.*The figures in the margin indicate full marks**Answers may be given either in Assamese or in English*

1. (a) State the function of Barbruah in the constitution of the Government of Assam as you can gather from the *Barphukanargeet* and his relation with the *Council of Gohains*, and discuss how far Rajmao and Burhagohain Dargaria usurped his power. 20

(b) State who were the followings and what part they played in Barphukanargeet: (i) বুৰুকৰ বৰুৱা, (ii) উদয়চিং বৰ্মান, (iii) পৰ্বতীয়া কুকন।

2. Compare the plot of *Rukminiharan Kabya* with that of the *Rukminiharan Drama* written by Sankardev. Discuss the reasons of the difference, if any. 16

3. 'The character of Monomati, the heroine of the novel, has been somewhat eclipsed by the charmingly romantic one of Pomila.' Discuss. 18

4. Examine the prose style of Kathageeta and compare it with that of the Buranjies written in 17th century. Discuss the reasons of the difference, and state which one is nearer to modern Assamese prose style. 16

5 Explain in Assamese and with reference to the context *any one* passage from each of the following groups :— 15

#### GROUP A

- (a) চাটুৰাৰ চাটুত নেদস্ত ৰাজা কাণ ।  
ব্যৰ্থ হুহি অৱশ্যে মাগলে পাই দান ॥  
ভুজঙ পৃথিৱী যেন ধৰ্ম ব্যৱহাৰ ।  
অহুচিতে পিন্ধৰাবো নিচিন্তস্ত মাৰ ॥
- (b) দুই মন্ত নাগে যেন কৰে হুলস্থূল ।  
বলি বাসবৰ যেন মিলিল তুমুল ॥  
হৰি হিৰণ্যাক্ষ যেন যুজন্ত সমৰে ।  
কৰন্ত আন্দোল যেন ত্ৰিপুৰ শঙ্কৰে ॥

#### GROUP B

- (a) কান্দোনত নোৱাৰি ঢেকিয়াল ফুকনে  
পাটীত লাফে মাৰি উঠে,  
ঘিঁউৰ চাকি লগাই ঢেকিয়াল ফুকনে  
চিঠিখন লিখিয়েই দিলে ।
- (b) “নগৰখন ৰাখি তই গাভৰু থাক ।  
নহৰি হুয়াৰ দলি বাস্ত,  
বছেৰেকৰ মূৰত তই কৰিবি কাজ ।”

#### GROUP C

(a) তেওঁৰ বাহিৰৰ সকলো বঙ ধেমালিৰ ভিতৰতো তেওঁৰ হৃদয় খানক কিবা এটা পোকে খুলি খুলি থাইছিল ।

(b) মানহঁত ছাৰামুখৰ ওচৰ পাওঁ পাওঁ হওঁতেই কৰ্মকুশলা পমীলাই চেগ বুজি টিঙ্গিৰি মাৰি বৰটোপত জুই দিলে ।

6. (a) Give the meanings of the following :—

5

বাৰ-জবো, বোকণ্ডি, ভেৰেকা, গাক গিলিপ, বজহ, মাউৰা, কৰিয়া, কৰাই, চামোহ, শৰাই ।

(b) Give the substance of the following :—

10

বাৰ গা নিৰ্কল আৰু কগীয়া, তাৰ কোনো মুখ নাই, আৰু জীৱনেই অসাৰ্থক, ইয়াক সকলোৰেই জানে ; এতেকে শৰীৰ যেন সবল আৰু নিৰোগী হয়, এইটো সকলোৰে বাঞ্ছা ; কিন্তু কি প্ৰকাৰে সেয়ে হব পাৰে আমাৰ দেশৰ সবহভাগ মানুহে তাক গমি নেচায়, আৰু নেজানে। শৰীৰ বলিষ্ঠ কৰিবৰ ঘাই উপায় শাৰীৰিক পৰিশ্ৰম। সেই পৰিশ্ৰম নকৰা মানুহৰ গা আটিল নহয়, সি কেতিয়াও বলৱান হব নোৱাৰে। কোমল বস্তু যে বলৱান নহয়, তাৰ দৃষ্টান্ত দেখাওঁতে লৰা আৰু বয়সীয়া মানুহৰ তুলনা দিলেই হয়। বয়সীয়া মানুহতকৈ লৰাৰ গা কোমল, এতেকে ডেকাতকৈ লৰা নিৰ্কল।

## SIXTH PAPER

*Examiner*—MR. A. N. BORAH, M.A.*The figures in the margin indicate full marks**Answers may be given in Assamese or in English*

1. Write a note on (i) শ্ৰীধৰকণ্ঠী and his কাণখোৱা পুঠি or (ii) 16  
বামস্বৰ্ণশতী and his ভীষ্মচৰিত পুঠি ; discuss the importance of either of these two books in the history of Assamese literature.

2. Examine the construction of a sixteenth century অক্ষীয়ানাট ; 17  
discuss the literary value of those dramas and state in what respect they were improvements on Sanskrit drama. State how far they were successful on the medieval Assamese stage and suggest reasons of their success.

3. Write a note on ব্ৰজবুলি element in Assamese literature. State 17  
by whom it was introduced and why, and what were the effects of its introduction.

Or,

Trace the origin and growth of the institution of *Satras* in Assam and write how they helped to develop the Assamese literature.

4. Write a short essay on the general characteristics of litera- 20  
ture and criticise the definition of literature as given by the author of সাহিত্যবিচাৰ।

5. Give the feminine of বৰুৱা, কচাৰী, বান্ধনি ; adjective forms of 15  
গাওঁ, বন, পানী ; noun forms of খা, দি ; plural form of তাই, তেওঁ ; and write in what sense the following particles are added to nouns, giving example of each of them টো, চটা, খিলা, জনী, গাল, গছ !

6. Decline the noun কাৰৈ and pronoun তই in all cases in both 15  
the numbers. Decline the verb কৰ in সম্ভাৱ্যভূত কাল and the পাচনী form of verb খা in বৰ্ত্তমানভূত কাল।



## INDIAN VERNACULARS (HINDI-SUBSIDIARY)

## FIFTH PAPER

*Examiner—MR. AMBIKAPRASAD BAJPAI**The questions are of equal value*

## FIRST HALF

*Answer the FIRST and SECOND questions and ANY ONE of the rest*

1. Who was Raja Sivaprasad and what is his place in Hindi literature?
2. Explain fully the following passage :—

(a) भोज राजा को कविता पर बड़ी रुचि थी जो कोई नया कवि उसके पास आता और कविताचातुर्य दिखलाता उसको वह अच्छा पारितोषिक देता और चाहता तो अपनी सभा में रख लेता था ।

(b) औरंगजेब ने अपनी सेना को उसी नियम से खड़ा किया और थोड़े ही कालमें दोनों और तोपें चलने लगीं ।

3. Translate any one of the following passages into English :—

(a) भैया इस पहाड़ का क्या नाम है जिसके पेड़ों पर मोर बैठे नाच रहे हैं ।

(b) हिन्दी के दो तीन पुराने मसाले हैं जिनकी बातें कह कर आगे बढ़ना चाहिये था । पर उनकी बातें हम पीछे कहेंगे ।

4. Give the meanings of the following words :—

गुफा, करोड़ो, सरदार, इमारत, दस्त्य ।

5. Decline बिड़िया in dative and genitive in both numbers.

## SECOND HALF

*Answer the FIRST and SECOND questions and ANY ONE of the rest*

1. Translate into English any two of the following :—

(a) आमवन्त के वचन सुहाये ।

सुनि हनुमान हृदय अति भाये ॥

तब लगी मोहि परखिपटु भाई ।

सहि दुख कन्द मूल फलखाई ॥

(b) चूनर सुरंग धोर धांधरे की लौटें भूमि,

चोटी परी पीठि पर मोती के लरन की ।

बिड़िया अनौट पग पैजनीर्यों लछिराम,

कंकन बलित चूरी चमकै करन की ।

- (c) भये प्रभात धेनु ढिग जाई  
पुजि रानि माल पहिराइ ॥  
बद्ध पियाई बांधि तब राजा ।  
खोल्यो तांहि चरावन काजा ।

2. Explain fully any two of the following in Hindi :—

- (a) छिन्न भिन्न समुदाय सनातन नित्य इसी से होता ।  
प्रवल विरधौ दल हो उसके शक्ति पुञ्जको खोता ॥  
धर्म आगह सब है केवल करने ही को झगड़ा ।  
नहीं तो शक्ति धर्म प्रेमी कैसा किससे रगड़ा ॥
- (b) गदहा थोरे दिनन में खूंद खाय इतराय  
अफरन्यो मारन कहै एराकी के लात ।
- (c) जो इसके तुम लेजाने मेयां तनक भी देर लगावोगे  
वह डुष्ट इसे भी मारैगा पछिताते ही रहि जावोगे

3. Who is the speaker in relation to 2 (c). Explain the allusions therein.

4. Give the meanings of the followings words :—

चिन्ता, ज्वाला, रैन, भंवर, गुमान, त्रिकालदर्शी ।

5. Who was Tulasi Dass and what is his place in Hindi? \*

## SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner—MR. NALINIMOHAN SANYAL, M.A.*

*Answer the FIRST TWO questions, and ONE of the remaining three*

1. Translate the following passages into English :—

(a) अच्छे स्वास्थ्य के लिये सफाई की आदत बहुत ज़रूरी है । सफाई की आदत पड़ जाने पर गन्दा रहना स्वयं अच्छा नहीं लगता । साफ-सुथरा रहने से चित्त प्रसन्न रहता है । सफाई की आदत से रोग नहीं हो सकते । पवित्र शरीर में हो पवित्र आत्मा का वास है । जिसकी आत्मा पवित्र है, उसका स्वास्थ्य भी अच्छा रहेगा । तन की सफाई का प्रभाव मन पर पड़ता है, और मन की सफाई का प्रभाव स्वास्थ्य पर पड़ता है । इस लिये स्वास्थ्य रहने की इच्छा हो, तो सफाई की आदत डालनी चाहिये ।

(b) लगभग एक वर्ष के बाद एक दिन मैं प्रातःकाल, स्नान-पूजा के बाद, अपने मकान पर बैठा हुआ था। मेरे नौकर ने आकर कहा कि एक महात्मा आपसे मिलना चाहते हैं। मैंने उन्हें सादर बुला भेजा। वह आये। मैंने उठकर दंडवत किया और शुभागमन का कारण पूछा। उन्होंने कहा, 'मैं काश्मीर से आया हूँ और महाराज का दर्शन चाहता हूँ। छः दिन से यहाँ ठहरा हुआ हूँ; पर महाराज से भेंट नहीं हो पाती। आज अन्तिम दिन है, मैं वापस जा रहा हूँ। आप महाराज से इतना ही कह देने की कृपा करेंगे कि काश्मीर से एक सन्त मिलने आये थे।'

2. Translate one of the following passages into Hindi :—

(a) The earth goes round the sun once in a year. This motion causes the seasons. In summer we see the sun overhead. The heat is very great now. People can hardly work in the field at noon. Tanks and well dry up, and people cannot get drinking water easily. But mangoes and jack-fruits ripen at this time and we eat them with great relish.

(b) One day as Satis was walking down the street, he saw a gentleman drop a bundle of notes. Satis picked it up and went after the gentleman who got into a carriage and drove away. Satis began to run after the carriage and managed to keep it in sight till it stopped before a large house. Satis came up and held out the bundle of notes before the gentleman.

3. (a) Give the substance in Hindi of the following :—

Boats sail on the rivers,  
And ships sail on the seas;  
But clouds that sail across the sky,  
Are prettier far than these.

(b) Give the main ideas contained in the following :—

समुद्रों में जहाजी जब दिशाएँ भूल जाते हैं।  
बटोही घोर जंगल में नहीं जब राह पाते हैं।  
उन्हें, आकाश के तारे ! तुम्हारा ही सहारा है।  
अँधेरे में उन्हें केवल तुम्हारा ही इशारा है।  
हमें भी दूर जाना है, समुद्रों को उतरना है।  
भयानक जंगलों की, घाटियों को पार करना है।  
हमें पहचान रखना है अभी से एक तारे को।  
तभी तो हम समझ लेंगे कभी उसके इशारे को।

4. Re-write the following correctly :—

दूसरा दिन राम जब बिछौना छोड़ा तब ७ बज गये थे और बहुत धूप चढ़ गया था। रात में जब वह पहुँचा था, तब वह नहीं जाना था कि वह घर की चारों ओर जंगल है। उसने बाहर में जाके मुँह हाथ धो आया। उसका पिताजी उसको पूछे कि तुम्हारा पाठशाला कब खलेगा।

5. (a) Re-write the following by putting in single words in each of the blanks :—

गत पन्द्रह बरसों — इटली — बहुत ही उन्नति — है । इस — पहले सभी बड़े पदों — विदेशी लोग — । किन्तु — थोड़े समय में ही सभी काम इटालियनों के हाथ में आ — हैं — समय महात्मा मसोलिनी राज्य — प्रधान मंत्री हैं ।

(b) Use in short sentences the nouns formed from two of the adjectives, and the adjectives formed from two of the nouns, given below :—

मूर्ति, पीड़ित, गौरव, क्षीण, कम्प, लघु, दान, उज्ज्वल ।

(c) Give the Sanskrit forms of five of the following words :—

नेह, हिय, आयस, सरिस, गोद, नाह, वयन, सच, बाट, पावस, होंठ, और ।

## SECOND HALF

*Attempt only THREE questions*

1. What were the religious views of Kabir, and what was the secret of the tremendous influence he possessed as religious reformer? Characterise his poetry.

2. Who was Bharatendu Harishchandra? Give an account of his importance in the history of Hindi literature.

3. Explain what is meant by रस and enumerate the different varieties of रस. The success of a poet depends, it is said, on the perfection with which he can depict a रस. Name Hindi poets who are noted for their success in dealing with one or more of the several रसेs.

4. Classify the Hindi poets into two groups—Bhakti and non-Bhakti, and give reasons for your views.

5. Write full notes on three of the following :—

(a) भक्तमाल ; (b) विद्यापति ; (c) नखशिख ; (d) गिरिधर कविराय ; (e) रहीम and (f) राजा लक्ष्मण सिंह ।

## INDIAN VERNACULARS—MAITHILI (SUBSIDIARY)

## FIFTH PAPER

*The questions are of equal value**Examiner—PANDIT BABUA MISRA*

## FIRST HALF

## GROUP A

1. Explain in Maithili and with reference to context any two of the following :—

- (a) सजलनयन कह भरत नाथ हम नहिं घुरि जायव ।  
 लक्ष्मण सङ वन रहव सङ्ग दुखदिवस गमायव ॥  
 नहिं रखवे जौ संग प्राण हम सत्वर त्यागव ।  
 वड़ गोठ अयश कपार राज झंझट नहिं लागव ॥  
 धयल कुशासन रौदमें पद्मासन पूर्वाभिमुख ।  
 हठ भरतक दृढ़ देखिके इन्द्रादिक मन बहुत दुख ॥
- (b) तनिक करव हम रुधिरपान कटकट कय खायव ।  
 नहि तौ छाड़व प्राण हठहि यमपुर चलि जायव ॥  
 सीता काँ लयआनि दशानन काँ हम देवनि ।  
 होयता भाय प्रसन्न बहुत धन सम्पति लेवनि ॥  
 चौदह सहस सकोप चललि खरदूषण सेना ।  
 प्रलयकाल जीमूत प्रवल मारुतसुत जेना ॥  
 एक कहय चल गमहि वाज नहि विजयक डंका ।  
 जायत दूर पड़ाय मानि मनमें मृति शंका ॥
- (c) जरल कनक मगिमय वर गेह ।  
 सम्पति रह की पाप सनेह ॥  
 दूत पराक्रम कहल न जाय ।  
 भाग्यवान काँ भूत कमाय ॥  
 कपि कह लंका करव विनाश ।  
 घैल कांचकेँ मुंगरक आश ॥  
 धिक रावण आनन न मलान ।  
 चोरक मुँह जनु चमकय चान ॥  
 दशकन्धर की रहवह चैन ।  
 भल घर मध देहल अछि वैन ॥  
 हनुमानक लग केओ न जाय ।  
 मारिक बरसौ भूत पड़ाय ॥

2. Explain fully, in English, any one of the following :—

- (a) ए सखि ए सखि न बोलइ आन ।  
 तुअ गुने लुबुधल निते आव कान ॥  
 निते निते निअर आव विनु काज ।  
 वेकतेओ हृदय नुकावय काज ॥  
 अनतहु जाइते' एतहि निहार ।  
 लुबुधल नयन हृदय के पार ॥  
 से अति नागर तौहे तसु तूल ।  
 एक नले गांथल दुइ जनि फूल ॥  
 भनहि विद्यापति कवि कण्ठहार ।  
 एकसर मनमथ दुइ जिव मार ॥
- (b) कण्ठक माझ कुसुम परगास ।।  
 भमर विकल नहि पावय वास ॥  
 भमरा भेलघुरय सवे ठाम ।  
 तौह विनु मालति नहिं विसराम ॥  
 रसमति माळति पुनु पुनु देखि ।  
 पिवय चाह मधु जीव उपेखि ॥  
 ओ मधुजीवी तौहें मधुरासि ।  
 सौचि धरसि मधु मने न लजासि ॥  
 अपनेहु मने गुनि बुझ अवगाहि ।  
 तसु दूषन बध लागत काहि ॥  
 भनहि विद्यापति तों पय जीव ।  
 अधर सुधारस जों पय पीव ॥

3. Was Krishna justified in persuading Arjuna to join the great war of Mahabharat? How far does this act of Krishna go to show his statesmanship? Give your own arguments.

Or,

Give an account of the play at dice between Yudhisthira and Duryodhan. Criticise the action of Bhishma and Drona in being simple spectators of the unjust play.

## SECOND HALF

### GROUP B

4. Give the substance of any two of the following :—

- (a) सत्य कं न छाड़ि सव दुष्ट कें पछाड़ि सदा ।  
 वेद इतिहास ओ पुरान कथा कान देव ।  
 वर्ण तथा आश्रम विभाग इहताक हेतु  
 श्रम ने गनैत सरवस्व बलिदान देव ॥

सीताराम गोरी-शिव-शारदा-विरञ्चिपद  
 सेवि नित्य मिथिलादशाक दिशि ध्यान देव ।  
 जाहि शुद्ध शान्तिप्रद सुखद सनातनिक  
 धर्म सौं जिवैछी ताहि हेतु हम जान देव ॥

- (4) सहस्र पूर्ण शशि रहओ गगन वसि देओ दशओ दिशि वन्दा ।  
 भरि वरिशओ विस वहओ दहओ दिश मलय समीरन मन्दा ॥  
 साजनि आव जिवन कोन काज ।  
 पहु मोहि हिन करु अपयश यग भरु सहय न से पाविय लाजे ॥  
 कोकिल अलिकुल करय वेआकुल करओ दहओ दुहु काने ।  
 सिसिर सुरभि जत देह दहओ तत हनओ सनओ सतवाने ॥  
 सुकवि उमापति हरि होएत परसन मान होयत समधाने ।  
 सकल नृपति पति हिन्दू पति जिऊ पटमहिषी विरमाने ॥

- (c) पड़ैए बूझि किछु ने ध्यान में हम भेल पागल छी ।  
 चलै छी ठाढ़ छी बैसल छी सूतल छी कि जागल छी ॥  
 कहौ क्यो किछु कतवो हम कोनो एक ठाम बैसल छी ।  
 कतेको दूरि छी तैओ अहाँ मनमें तँ पैसल छी ॥  
 बुझा देमक तँ चाही कौखना अनजानकँ कविएँ ।  
 जे ई अपराध छौ तोहर किए हमरा सँ रसल छी ॥  
 बड़ा सन्देह में छी हम खुसो होइ छै परोसिनकै ।  
 करैछी जे हँसो सवसँ अहाँ अत्यन्त चञ्चल छी ॥  
 कहाँ छी प्राण हमरा तँ निवाहु प्रीति जा जीवी ।  
 अहाँ निश्चिन्त छी तँ की अहाँ विन हम तँ वेकल छी ॥

5. Translate into English any one of the following :—

(a) रमानाथ झा काल्हि राजनगर गेल छलाह । दू बजे हकासल पिआसल हमरा डेरा पर पहुँचलाह । हमरा बजार जाय कहलैन्ह, किन्तु हम रौदमें चलनिहार नहिं, कइ देलिण्ह जे माथ दुखाइत अछि । पड़लाह बड़ा तारतम्य में, कारण जे मौदा करय सभके नहिं अवैत छैक—दोकानदारक संग मोलमोलाइ करव सोझ नहिं । तखन लगलाह हमरा गोहरावय, किन्तु चललैन्ह किछु नहिं हम माथ वान्हि पड़ि रहलहुँ । जखन निश्चय बुझलैन्ह जे हम बजार नहिं जयबैन्ह, तखन अपन मोटराचोदरी लय विदा भेलाह । हमहु उठि मुँहहाथ धो जलपान कय गाम विदा भेलहुँ । बजारमें ओ ठकायल तँ निश्चय होयताह, किन्तु हमरा किछु ज्ञात नहिं । गाम अओताह तखन सभ बुझबै करव ।

(b) परम्परागत कल्पना लोकक मस्तिष्क तथा व्यवहार पर एतेक अधिकार प्राप्त कयने अछि जे ओकरा नाश करवाले अत्यन्त साहसक आवश्यकता छैक । केवल वजने भुक्ने ओहिमें क्यो कृतकार्य नहिं भय सकै । ओहिछे

कार्यशील ह्यवाक आवश्यकता हैक। नवीन कल्पनाक निर्माण करवाक व्रतकें सम्पूर्ण करवाले बहुत त्याग, बहुत सहनशीलता और बहुत दृढ़ताक आवश्यकता हैक। विना अपन विचारकें कार्यरूपमें परिणत करवाक स्पृहा रखने, आन्दोलनमें ओ सजीवता नहिं आवि सकैछ जकर आवश्यकता हैक आन्दोलनकें सफल बनयवामें।

6. Translate the following into Maithili :—

When Alexander was in the Punjab, an exile from the court of Magadha, called Chandragupta, joined him and lived with him for some time. This adventurer was a kinsman of the reigning king of Magadha, whose displeasure he had incurred by his insolent behaviour. As soon as the news of Alexander's death reached India, he headed a general rising against the Macedonian authority in the Punjab and wrested the country from the foreigners.

### SIXTH PAPER

Examiner—PANDIT BRAJAMOHAN THAKUR

The figures in the margin indicate full marks

### FIRST HALF

Only THREE questions are to be attempted

1. Discuss critically what strikes you to be the distinguishing 16½  
features of Maithili grammar as compared with the grammar of any of  
the sister vernaculars (which you select for the purpose).

2. Decline “ओ” both in Honorific and non-Honorific forms; or, give 16½  
rules that guide the formation of feminine gender in cases of जातिवाचक  
words and give opposite gender of any of the following :—

मोदी, केओट, कुजड़नी, मुसहर, कोइर, कैथिन, दुसाधनी, मिशराइन,  
ग्वारि, तेलि सोति, साहेव, ससुर, गाय, वाभन ।

3. Construct causal verbs (प्रेरणार्थक) and also active verbs (सकर्मक), 16½  
where possible, out of the following :—

सूतव, जागव, पढ़व, देब, खायव, लिखव, मानव, करव, चलव,  
मारब, पीटव ।

4. Frame sentences to use any three set of verbs given below, and 16½  
give English translation of the sentences so framed :—

(1) पढ़, पढ़य, पढ़ि, पढ़ू, पढ़ह ;

(2) जाय, जा, जो जायु, जायलै ;

(3) कय, करय, कराय, करयु-करू ;

(4) लय, लैलै, “लेब” (accent on the first letter) लेवय or “लेब”  
(accent on the last letter).

5. Conjugate verb “करव” in imperative mood.

16½





## M.A. EXAMINATION

2. Clearly explain in English :—

ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ

ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ

3. Write notes on any four of the following :—

(a) King Vijaya, (b) Lata Rata, (c) Kuvāni, (d) Tam ba Panni dipa, (e) Lankapura, (f) Sirisavastu Pura, (g) Malala Rata, (h) Kusāvati.

4. Give a short history of the reign of King Pandukabhaya or of King Vijaya :—

5. Decline the following :—

ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ  
 ଶ୍ରୀମଦ୍ଭଗବତ୍ ଶ୍ରୀକୃଷ୍ଣ

Answer any Three.

1. Translate into English:—

തെളെമ തെളെമിട്ടെ പ  
 പട്ടി പട്ടിപ്പി അല്ലെ പ  
 വിചാരമി വി പ  
 തെളെമ പട്ടിതെളെമിട്ടെ പ

പട്ടിതെളെമിട്ടെ പ  
 പട്ടിതെളെമിട്ടെ പ  
 പട്ടിതെളെമിട്ടെ പ  
 പട്ടിതെളെമിട്ടെ പ

2. Give meaning of the following:—

തെളെമ, പട്ടി, പട്ടി, പട്ടി, പട്ടി  
 പട്ടി, പട്ടി, പട്ടി, പട്ടി, പട്ടി

3. Explain the following:—

പട്ടിതെളെമ പ  
 പട്ടിതെളെമ പ  
 പട്ടിതെളെമ പ  
 പട്ടിതെളെമ പ

പട്ടിതെളെമ പ  
 പട്ടിതെളെമ പ  
 പട്ടിതെളെമ പ  
 പട്ടിതെളെമ പ

4. Write notes on the following :—

නම. (noun)  
විෂයය (Case)

5. Give in English the full sense of the following :—

සත් දත් සත් සත් සත් සත්  
 වත් දත් නිසාත් වත්  
 වත් වත් නිසාත් නිසා  
 වත් වත් වත් වත් වත් වත් වත් වත්

### SIXTH PAPER

Examiner—REV. P. SILANANDA

*The questions are of equal value.*

### FIRST HALF

Answer ANY THREE

1. Give an outline, in English, of the story of "Kusajataka".
2. Write short notes on the following :—
  - (a) The great Poet Alagiyawanna.
  - (b) Amāwatura.
  - (c) Samnna Phala Sutra.
3. Give an estimate of the character and work of "Buddhagosha".
4. Give a short note of the origin of the Sinhalese Language.
5. Explain the following :—  
 Budda Sinhalese, Missra Sinhalese.

## SECOND HALF

Answer ANY THREE

How many kinds of ව්‍යවහිත (Piyavi) and (Sandhi) ව්‍යවහිත are in Sinhalese?  
 දිගු, කුඩු, ගුණ, ගුණ, ගුණ,  
 කුඩු, කුඩු, කුඩු, කුඩු, කුඩු,  
 ව්‍යවහිත, ව්‍යවහිත, ව්‍යවහිත, ව්‍යවහිත,

2. Write a short essay in Sinhalese Grammar.
3. Give a brief sketch of the Sinhalese Literature.
4. Write the Sinhalese form of the following Sanskrit words.

5. Decline ව්‍යවහිත (Niture)

## INDIAN VERNACULARS—TELUGU (SUBSIDIARY)

## FIFTH PAPER

Examiner—DR. B. RAMCHANDRA RAU, M.A., PH.D.

*The questions are of equal value**Answer ANY THREE in each half*

## FIRST HALF

1. Explain the story of the cotton thieves in your own language. Point out the moral from the tale.

2. "సర్వనామము" వీటి యొక్క ప్రాముఖ్యతను గూర్చి విపులముగా వ్రాయుడు. Explain the importance of *pronoun* in the grammatical structure of the language.

3. Write the story of 'The master and servant' in your own words. Explain the moral.

4. Give the meaning of the following words:—

దురాచారము, అనామము, గౌరవము, సాక్షి, తలాది, తుప్పుడు, వికీర్ణము, వ్యాధిభారము.

5. "నామ విశేషణము" లిసనేమి? ఉదాహరణవిచ్చుచు వాక్యములు వ్రాయుడు.

What are adjectives? Name them and make use of them in your own sentences.

## SECOND HALF

1. Explain the meaning of the following passage in your own words :—

రామ । కృష్ణ । యంచ రవళించు చెంతయో

భక్తవరుని వలెను బలుకు చుండు

కానిపిల్లి లోక గ్రహించి నప్పుడు

పిఠికివగుచు వాని మఱకువేము ?

2. Explain the preparation of coins in the mint.

3. Explain the principles of Essay writing.

4. Give the meaning of the following words :—

భద్రము, విధి, వర్తకుడు, అపరాధము, దోషములు, నీటిపట్టు, మీటు.

5. Explain how Dasaratha received his curse.

## SIXTH PAPER

Examiner —DR. B. RAMCHANDRA RAU, M.A., PH.D.

The questions are of equal value

Attempt ANY THREE in EACH half

## FIRST HALF

1. Estimate the services of Nannayya to the cause of Telugu literature.

2. “దేశభాషలందెల్ల తెలుగు భాషలెస్స.” Do you agree with the above opinion that the Telugu language is the best of all the languages of this country? If so, why?

3. ప్రబంధమనవేమి? దానికిని పురాణమునకు ముఖ్య తారతమ్యములేది?

Differentiate between *prabhandam* and *puranam* and point out the characteristics of a *prabhandam*.

4. What is meant by “అలంకారములు” or “figures of speech”? Do you advocate a free use of these figures of speech?

5. Explain the contentions of the advocates of Modern Telugu. Why should you discard Classical Telugu?

## SECOND HALF

1. Write short notes on any four of the following :—

పీఠి నాటకము, మహాభారతము, శ్రీనాథుడు, శ్రీకృష్ణ దేవరాయలు, పితృకరింగం.

2. Estimate the main features of the modern literary age. Point out its salient merits and demerits.

3. Write a brief note on the *foreign* element in the Telugu language.

Or,

Estimate the influence of the Canarese language on Telugu.

4. **తెలుగు భాషయందు కష్టమైన నాటకము లేల శత్రు ?** How do you account for the comparative absence of Tragedies in the Telugu language ?

## INDIAN VERNACULARS—ORIYA (SUBSIDIARY)

### FIFTH PAPER

Examiner—PANDIT BENAYAK MISRA

*The questions are of equal value*

1. Explain any three of the following passages with reference to the context :—

- (a) ସହସା ଫଟର ରୁଷି-ଲେତନ-କମଳ,  
ଖେଲେ ତହିଁ ଅହାକିବା ଜ୍ୟୋତି ସୁବମଳ ।  
ବାହ୍ୟ-ଅଭ୍ୟନ୍ତର-ଭେଦ ଏବେ ନାହିଁ ଅଭ,  
ଦଶି ଦଶି ଏକ ଜ୍ୟୋତି ଦଶେ ଦାଉ ଦାଉ ।  
କ୍ଷିତି ଜଡ଼ ଅଜ ଅହା ! କି ଅମୃତମୟ,  
ବ୍ରହ୍ମ-ନିଶ୍ଚୟିତେ ପୂର୍ଣ୍ଣ ବ୍ରହ୍ମାଣ୍ଡ-ହୃଦୟ ।  
ବ୍ରହ୍ମାଣ୍ଡ-ହୃଦୟ-ତତ୍ତ୍ୱ ବାଜେ ଏକତାନେ  
ଓଜ୍ଜ୍ୱଳ-ଝଙ୍କାରମୟ ମର୍ମରେଦ-ଗାନେ ।
- (b) ନରସୁମ୍ନା ପରବତ ଦମି ଶିଳ୍ପବଳେ  
କାଳଗର୍ବ-ଝର୍ବକାଘା ଲାଞ୍ଜିତନୟ  
ଗାନ୍ଧାର କର୍ଣ୍ଣାଟ ପୁଣି ଗୁର୍ଜର ଉତ୍ତଳେ  
ନିର୍ମଳେ କୌଶଳେ ଏହି ନରପତିତୟ ;  
ସ୍ଥାପି କେତେ ଜୟସ୍ଥୁପ ଗୌରବ-କେତନ  
ଭରତର ଜୟସ୍ଥୁପ ଦେଶଦେଶାନ୍ତରେ  
ବସ୍ତ୍ରାଭରେ ମହାଯଶା ମହାପଦଗଣ,  
ପ୍ରକୃତରଞ୍ଜନ ବ୍ରତ ପାଳ ଯତନରେ  
ପ୍ରତିଷ୍ଠିଲେ ଶାନ୍ତିମୟ ସୁଶାସନ ଦଶ ଦଶନ୍ତରେ ।

- (c) ପ୍ରାୟ ସବୁଦି ଏହିପରି ବର୍ଣ୍ଣନା ପୁରାଣସମୂହରେ ମଧ୍ୟ ଉଦ୍ୟାକାର  
ଅଖ୍ୟାୟିକା ପ୍ରଚୁର ପରମାଶରେ ଅଛି । ସୂର୍ଯ୍ୟଶା ବକଟରୂପା ପ୍ରଣବୀ,

ନବଦୁର୍ବାଦଳଶ୍ୟାମ, ଶଙ୍ଖାକଲେତନ ଗମକର ଅଲୌକିକ ସୌନ୍ଦର୍ଯ୍ୟ  
ସନ୍ଦର୍ଶନ କର ତାହାର କୁପ୍ରବୃତ୍ତି ଜାଣିବ ହୋଇ ଉଠିଲ । ଏକ ବସ୍ତୁ  
ଦର୍ଶନରେ କାହାର ମନରେ ସ୍ୱର୍ଗୀୟ ଭାବର ଉଦୟ ହୁଏ, କାହାର ମନ ବା  
ଚରକ ଅନ୍ଧକୁ ପ୍ରଧାବିତ ହୁଏ ।

- (d) ପାଟେକ ପିନ୍ଧିଲେ ତହିଁ ନେତ ଅରରଣ ।  
ପାଦରେ ନୁପୁର ଯେ ବାଜଇ ରୁଣ୍ଡଝୁଣ ।  
ନୟନେ କଳ୍ପଲ ଯେ କପୋଳେ ଶୁଭୁତା ।  
ତାମୂଳ ଭୁଞ୍ଜିଣ ସେ ଅଧର କଲ ଲତା ।

2. Frame sentences to illustrate the use of *any four* of the following :—

ଉଦ୍ଧ, ବେନି, ସତେ, ବିଜେ, ଘେନ, ପଟାନ୍ତର.

3. What is the thought underlying the poem ଏ ସୃଷ୍ଟି ଅମୃତମୟ ହେ ?  
Or,

Give an idea of ଭୁବିଦ୍ବାନୀ, according to the writer of the Bibidha Prabandha, in your own Oriya.

4. Translate *any five* of the following sentences into Oriya :—

- Men may come and men may go, but the brook goes on for ever.
- Time and tide wait for none.
- Have you seen a copy of the Report published by the Orissa Boundary Commission?
- The rains have started early this year. Do you think this will be good for the tillers of the soil?
- You must be alert. A sleeping fox catches no poultry.
- The prices of things have gone down very much. Whom will it benefit? I should like to know.

5. Translate *any five* of the following sentences into English :—

(a) ପ୍ରଜାମାନଙ୍କ ସୁବିଧାନିମନ୍ତେ ରାଜମାର୍ଗମାନ ଉତ୍ତମରୂପେ ପ୍ରସ୍ତୁତ  
କରା ଗଲା । ଚିଠିପତ୍ରର ଯାତାୟାତସକାଶେ ସ୍ଥାନେ ସ୍ଥାନେ ପୋଷ୍ଟ-  
ଅଫିସମାନ ରଖାଗଲା ।



(b) ମୁଁ କିଛି କହିବ ନାହିଁ, କହିବାବେଳକୁ ଶବ୍ଦ ଫାଟି ଯାଉଛି ।

(c) ଉତ୍ପତ୍ତି ଭିତରେ କଣ ହେଲା କଣ ନ ହେଲା, ଥରେ ବୁଝାବୁଝି କରିବାର ଉଚିତ ଥିଲା ।

(d) ଅଧୁନିକ ଯୁଗରେ ଗଙ୍ଗାଧର ମେହର, କବି ଚନ୍ଦ୍ରାମଣି, ନନ୍ଦ-କିଶୋର ବଳ ପ୍ରଭୃତି କବିମାନେ ପଦ୍ୟକାବ୍ୟମାନ ରଚନା କରି ଉତ୍କଳ ଭାଷାର ଶ୍ରୀବୃଦ୍ଧି କରି ଯାଇଛନ୍ତି ।

(e) ତୁମେ ମାଳିକ ହେବ, ଏ ମାଙ୍କଡ଼ ସିଲ୍‌ଖଣ୍ଡ କଣ ହେବ ? ମୋ ପାଖରେ ପାଞ୍ଚ କୋଢ଼ି ଦଣ କୋଢ଼ି ଟଙ୍କା ଅଛି, ସବୁ ଦେବ, ତୁମେ ସାଇବକୁ ଦେଇ ମାଳିକ ହୋଇ ଅସ ।

(f) ବାପୁଗଣର ମହାସାଗର ମଧ୍ୟରେ ମନୁଷ୍ୟ ବୁଢ଼ି ରହିଅଛି—ବାପୁ ପ୍ରତିମୁହୂର୍ତ୍ତରେ ତାହାର ଜୀବନ ରକ୍ଷା କରୁଅଛି ; କିନ୍ତୁ ମନୁଷ୍ୟ ତାହା ଚନ୍ଦ୍ରା କରେ ନାହିଁ ।

## SIXTH PAPER

*Examiner*—MR. PRIYARAJAN SEN, M.A.

*The questions are of equal value*

1. Write an account of *Koili* lyrics, and describe the form of the majority of these lyrics.

*Or,*

Discuss the place of *Abhimanyu Sāmantasinhār* in the history of Oriya literature.

2. Write brief notes on any four of the following :—

*Mrigunī stuti, Dāṇḍī Rāmāyaṇa, Prabandha Purṇachandra, Broṇo Nath Barājēnā, Māmu.*

3. Estimate the importance of Jagannath Dasa's *Bhagabat* or Radhanath's *Mahāyātra* in the history of Oriya literature.

4. Conjugate କୁ ଥାନ୍ତି in ଅନବ୍ୟୟନ ଅଞ୍ଚଳ in all the persons, and both the numbers.

Or,

Give the ପ୍ରୟୋଜକ ଫିରା forms of the following verbs :—

ତାଳିବା, ଧରିବା, ବଳିବା, ଘେନିବା, ମଣିବା.

5. Correct errors, if any, in the following :—

ଭାଗ୍ୟବାନତା, ତରଳକୃତ, ମହଦୃଘଶ, ଶ୍ରବିତ, ଶିକ୍ୟତା, ଅହୁନିଶି, ବନପତ, and ପଦ୍ମନାଭ.

6. Distinguish between ବହୁବ୍ରୀହି and ଅବ୍ୟୟୀଭୂତ forms, quoting examples of either.

Or,

Decline କେ or ସେ in singular number only and in ଚର୍ଚ୍ଚ, କରଣ, ଅପାଦାନ forms.

## INDIAN VERNACULARS—BASIC LANGUAGES

### PĀLI

#### SEVENTH PAPER

Examiner—MR. SAILENDRANATH MITRA, M.A.

Full marks—50

The figures in the margin indicate full marks

1. *Either,* 10

Describe the general character of the Pāli language, giving illustrations in support of your answer.

Or,

Give, in some detail, the causes of phonetic change shown by Pāli.

2. Translate into English or your own vernacular *three only* of the following extracts (*two* from Group A and *one* from Group B), adding philological notes where necessary :— 16

#### A

(a) Samma bālasuṃsumāra, imesaṃ sattānaṃ hadayaṃ nāma rukkhagge hoti ti saññī ahoṣi, bālo si, abasaṃ taṃ veñcesasi, tava phala-phalaṃ tam eva hotu, sarīraṃ eva pana te mahantaṃ, paññiṃ pana n'atthi.

(b) Sārathi kiñcāpi Buddhuppādassa abhāvā pabbajitam vā pabbajitaguṇe vā na jānāti, devānubhāvena pana "pabbajito nān' esa devā" ti vatvā pabbajāya guṇe vaṇṇesi. Bodhisatto pabbajjāya ruciṃ uppādetvā vatvā pabbajāya guṇe vaṇṇesi. Bodhisatto pabbajjāya ruciṃ uppādetvā taṃ divasaṃ uyyāsaṃ agamāsi. Dighabbhānakā pañāhu : cattāri nimittāni ekadivaseṇ'eva divā agamāsi.

(c) So evaṃ vadeyya : "nāhaṃ tava bhariyaṃ nemi, aññā sā dārikā daharī taruṇī yā tayā vāritā ca dinnasuñkā ca, aññā'yaṃ dārikā mahatī vayappattā mayā vāritā ca dinnasuñkā cā " ti, te vivadamānā tavā santike āgaccheyyaṃ, kassa tvaṃ mahārāja atthaṃ dhāreyyāsi ti.

(d) "Katham jānāsi paṇḍitā " ti. "Akkhinam animisatāya c'eva rattatāya ca chāyāya abhāvena ca nirāsaṃkatāya ca nikkaruṇatāya cā " ti. Atha naṃ pucchi : "kāsi tvaṃ " ti "Yakkhini-mhi sāmī " ti. "Kasmā imaṃ dāraṃ gaṇhī " ti. "Khādituṃ sāmī " ti.

## B

- (a) Esā Namuci te senā Kaṇhassābhīppabāraṇī |  
Na naṃ asūro jināti, jetvā ca labhate sukhaṃ ||  
Esa muñ'haṃ parihare, dhiratthu idha jīvitaṃ ||  
Saṅgāme me mataṃ seyyo yañce jīve parā'ito ||
- (b) Samantā dhajiniṃ divā yuttaṃ Māraṃ savāhanam |  
Yuddhāya paccuggacchāmi mā maṃ thānā acāvaya ||  
Yaṃ te taṃ nappasahati senaṃ loko sadevako |  
Taṃ te paññāya bhañ'āmi āvaṃ pattaṃ va amhaṇā ||
- (c) "Nāhaṃ bhatako 'smi kassaci, nibbiṭṭhena carāmi sabbaloke |  
Attho bhatiyā na vijjati, atha ce patthayasi pavassa deva " ||  
"Atthi vasā, atthi dhenupā, godharaṇiyo pavaniyo pi atthi |  
Usabho pi gavampati ca atthi, aha ce patthayasi pavassa deva " ||

## 3. (i) Comment fully on any two of the following :—

(a) *Māgadhism* in Pāli, (b) the form and use of the Dative, (c) the form and use of the Gerund, and (d) the fate of the old Dual in Pāli.

Give illustration in support of your answer.

## (ii) Write notes on any three of the following :—

Aciravati, sotāpanna, disākāka, Nerañjarā, Yogakkhema, and Kaṇha.

(iii) Illustrate the use of any five of the following Pāli terms and expressions and show how they have been represented in the vernaculars : *ahuhāliyaṃ, tutaṃ, alla, cuddasa, aruṇaṃ uṭṭhapesi daddubhaṃ, akāsi, and uraṇaṃ dātā*.

## PRĀKRIT

## SEVENTH PAPER

Examiners— { PANDIT HARAGOVIND DAS SETH  
{ PANDIT VIDUSEKHAR SASTRI

The figures in the margin indicate full marks

Attempt THREE questions only, of which Questions 1 and 4 are compulsory

1. (a) उअ णिबलणिप्फंदा भिसिणीवत्तम्भि रेहइ बलाभा ।  
णिम्मकमरगअभाअणपरिट्ठिआ संखसुत्तिव्व ॥

(b) -तए णं से सहाळपुत्ते आजीविओवासए समणं भगवं महावीरं एवं वयासी, “एस णं भंते पुत्तिं मट्ठिया आसी, तओ पच्छा उदएणं निमिज्जइ, -त्ता छारेण य करिसेण य एगयओ मीसिज्जइ ; -त्ता चक्के आरोहिज्जइ ; तओ बहवे करगा य जाव उट्ठियाओ य कज्जंति ।”

(c) दाणिं अत्तच्छन्दाणुआरिगी संवुत्ता म्हि जा इमस्स पुरुवंसस्स पच्चएण सुहमहुणो हिअपत्थारस्स हत्थम्भासं उवागदा ।

(d) उअरोहराअमच्छरलोहेहिं णायवज्जिर्य जेण ।  
ण कओ दोण्ह विसेमो ववहारे कोवि मणयं पि ॥  
दिअवरदिष्णाणुज्जं जेण जगं रंजिऊण सयलं पि ।  
णिम्मच्छरेण जगियं दुट्ठाणवि दंढणिट्ठवणं ॥

(i) Name the dialects, as the case may be, of the passages quoted above.

(ii) Explain (a) and (c), giving Sanskrit equivalents.

(iii) Translate (b) and (d) into Sanskrit.

(iv) Explain the form वयासी and कज्जंति in (b), म्हि in (c) and दोण्ह and -णिट्ठवणं in (d).

2. Form five sentences, using the following words :—

10

सोउं, अम्हे, तिणिण, पुच्छिस्सं, आणेसु, आढप्पइ, चत्त, समासत्थ ।

3. Translate into English :—

10

कथं अपावे चालुदत्ते वावादीअदि ! हगे णिअलेण शामिणा बन्धिदे ।  
भोइ, अक्कन्दामि । सुणाध, अरया सुणाध । अत्थि दाणिं मए पावेण  
पवहणपडिवत्तेण पुस्पकलण्डअयिष्णुय्याणं वसन्तसेणा णीदा । तदो मम  
शामिणा ‘मं ण कामेशि’ त्ति कडुअ, बाहुपाशत्रलक्कालेण माळिदा, ण उण  
एदिणा अरयेण । कथं ? वा दूळदाए ण कोवि शुणादि । ता किं कलेमि ?  
अत्ताणअं पाडेमि । यइ एवं कलेमि, तदा अय्यचालुदत्ते ण वावादीअदि ।  
भोइ । इमादो पाशादा बालगपदोळिकादो एदिगा यिष्णगवक्खेण अत्ताणअं  
णिक्खिवामि ।

4. (a) वैतालिकः । सुहसंज्ञा होइ देवस्स ।

20

लोआणं लोअणेहिं सह कमलवर्णं अद्धणिहं कुणन्तो  
मुञ्चन्तो तिब्बभावं सह अ सरहसं माणिणीमाणसेहिं ।  
मज्झिहारत्तमुत्तच्छविकिरणचओ चक्कवाएक्कमित्तो  
जाओ अत्थाचलत्थो उवह दिणमणी पिवक्कणारिक्खिणो ॥

’ राजा । संनिहिदो संज्ञासमओ बह्वदि ।

- (b) विदूषकः । संकेदकालो कधिदो सहीहिं ।  
विचक्षणा । एवं करीअडु ।

- (c) राजा तामनुसन्धाय ।

दूरे किजउ चम्पअस्स कलिआ कज्जं हडिहीअ किं  
अलोल्लाह वि कज्जणेण गणणा का नाम जख्खेण वि ।  
लावण्णस्स णवुगाएन्दुमहुच्छाअस्स रतिस्सा पुरो  
पच्चगोहि वि केसरस्स कुसुमुक्केरेहि किं कारणं ॥

(i) Write preferably in Prākṛit or Sanskrit, what is said by the poet in (a) and (c).

(ii) Write all the vernacular words that can be derived from those used in Prākṛit in (a), giving their original Sanskrit forms.

(iii) Account for the doubling of *k* in *ekka* in *ekkamitto* in (a), and write a few words from your own vernacular in which such doubling is found.

(iv) What is *uraha* in (a)? What is its alternative form? Attempt to find out its connection with a Sanskrit word.

(v) For *-nāriṅga-* in (a) some MSS. read *-nāraṅga-*. Which of them is correct in your opinion? Which will you prefer? Give your grounds.

(vi) Explain the formation of *kariadu* in (b) and give its alternative forms, if any.

(vii) Write the alternative forms of *haliddia*, *ollollai*, and *tissā*, all in (c).

5. (a) एसा सरीरिणी मअरद्धअपाळित्तिआ देहन्तरसंठिदा सिङ्गारसबर- 10  
चावलट्ठी दिवससंचारिणी पुष्णिमाचन्दचन्दिआ । अवि अ गुणगणमाणिक्क-  
मञ्जूसा रदणमई बाउल्लिआ । तथा अ एसा विसारिणी कुसुमनिम्भरा  
। किं च

- (b) भुवणजअपडाआ रूवरेहा इमीए  
जह तह णअणाणं गोअरं जस्स जाह ।  
वसइ मअरकेऊ तस्स चित्ते विचित्ते  
वलइअधणुदण्डो पुट्ठिएहिं सरेहिं ॥

(i) Reproduce (a) and (b), as literally as you can, in English.

(ii) In (a) there are *avi a* (= *api ca*) and *kiṃ ca*. Explain why in the first case *c* is dropped and not in the second.

(iii) Decline *madhulacchī candiā*, and *marakeu*, and Sanskrit *idam* in the singular number.

## PERSIAN

## SEVENTH PAPER

*Examiner—AGA MD. KAZIM SHERAZI**The figures in the margin indicate full marks*

1. Translate into English any six of the following :— 12

طبيب دوائى از بغل در آورد - پادشاه ازین خبر  
دلنگ شد - منجم را بزندان فرستاد - احمق لزه من  
از خوف نیست - در فصل بهار بصحرأ رفته بودیم - مورچه  
میان آب نهر افتاد - در فصل پائیز پدر بتماشای باغ  
رفت - دست جمع نزد ملا آمدند - پادشاه بشهر بزرگ  
آمد - کار آنمرد خوب نیست - در آنجا گاوهای سفید دیدم -

2. State the influence of Persian language on your vernacular. 10  
Support your statements with examples.

3. (a) How many genders are there in Persian? How is the 6  
feminine distinguished from the masculine?

- (b) Name the parts of speech to which the following words 4  
belong :—

کلکته - خود - کوچک - هرکه - من - گفت - خوب - در

- (c) How degrees of comparison are formed in Persian? Give 6  
examples.

4. Translate into Persian any six of the following :— 12

This is a black horse. Whose book is this? He came very late. Come to-morrow morning. It is a big garden. He did not come. Where did you go? He saw a small dog. I saw his sister. The day is very hot. Don't go home. She is sick.

## INDIAN VERNACULARS—BENGALI

## EIGHTH PAPER

## BENGALI PHILOLOGY

*Examiner—DR. S. K. CHATTERJI**The questions are of equal value**Answer six questions only*

1. Indicate clearly the line of development of Bengali as a New Indo-Aryan language from Old Indo-Aryan, and state in this connexion the relationship of Bengali with classical Sanskrit and Pāli. Make your answer clear by means of a genealogical table or tables.

2. Discuss the question of 'Inner' and 'Outer' Aryan in the history of the Aryan speech in India.

Or,

Write a historical note on the Aryanisation of Bengal in language, bringing out the question of the non-Aryan substratum in Bengali.

3. Into what periods can the history of the Bengali language be divided? Give the characteristics of each of these periods.

4. Indicate the extent and importance of the various foreign elements of Bengali.

5. Discuss the phenomena of Anaptyxis, Prothesis, Epenthesis, and Assimilation, in Bengali.

6. Explain in all their bearings the terms *tatsama*, *semitatsama*, *tadbhava*, and *desi*, giving suitable illustrations.

Indicate the various stages in the history of the following words :—

দাম, আরসী, সরিষা, গিল্লী, নেমন্তন্ন, জোছনা ।

7. Write notes on two of the following :—

(i) The Payār Metre.

(ii) Reduced Nasals.

(iii) Treatment of Prakrit *udvṛtta* vowels in Bengali.

(iv) Compound Verbs.

8. Give the sources of four of the following Bengali sounds :—

[æ], [ʈh], [t], [n], [b], [h].

9. In the declension of the Bengali noun, give in brief the history of those inflexions which are derived from Old Indo-Aryan, and those which developed out of Middle Indo-Aryan.

Or,

Explain the origin of the affix এ in the following :—

বাঘে খায়; দশে মিলি করি কাজ; জিজ্ঞাসিব জনে জনে; হাতে না মেরে ভাতে মারে; বরে বাইরে ।

10. Classify the verb-roots of Bengali in their formation and in their conjugation.

11. Indicate the scheme of the Bengali tenses, simple and compound, briefly touching upon their origin, and write a short note on the history of the Bengali compound tenses.

12. Write full etymological notes, with special reference to their phonology, on eight of the following words :—

ভেখ, পাঁচাল, আড়াই, লাট, গোরু, বাবু, বিলাত, সড়ক, চাবি, সাঁওতাল, শিল্পি, মিল্লি, চাই as in কি চাই, দেউটী, জেঠামি, চাহিদা, হরতাল, জাস্ততো ভাই, টেকো (= spindle), চৌতিশা, দেউলে, পরে (= puts on), গুঁই (a surname), সনাস্ত, খ'দেয় ।

## INDIAN VERNACULARS—HINDI

## EIGHTH PAPER

## FIRST HALF

*Examiner*—DR. S. K. CHATTERJI, M.A., D.LITT.

*The questions are of equal value*

*Attempt ANY THREE of the following questions*

1. Give a short account of the Arabic and Persian element in Hindi. Mention, in this connection, some of the Persian suffixes and prefixes current in Hindi. How are non-Indian Perso-Arabic sounds represented in Hindi?

2. Discuss the derivation of the Hindi fractionals  $\frac{1}{2}$ ,  $-\frac{1}{2}$ ,  $+\frac{1}{2}$ ,  $+\frac{3}{4}$ ,  $1\frac{1}{2}$ ,  $2\frac{1}{2}$ ,  $3\frac{1}{2}$ ,  $4\frac{1}{2}$ ,  $5\frac{1}{2}$ , and  $6\frac{1}{2}$ , and of the first five ordinals. How are the ordinal numbers formed in Hindi? Derive तीसासो and पनराहासो and explain and illustrate the terms 'collectives' and 'aggregatives' of Hindi numerals.

3. Explain and illustrate, with examples from Hindi, any five of the following grammatical terms: prothesis, metathesis, assimilation, dissimilation, hiatus, weak and strong forms of nouns, periphrastic plural compound pronouns, genitive of time and place, and locative of limitation.

4. What is the inherent principle underlying the gender system of Hindi? Name a few Hindi tatsama or tadbhava feminine nouns which are masculine in Sanskrit. Classify nouns that are masculine or feminine by signification. How do you classify according to gender words of Arabic and Persian origin? What do you understand by the term, 'masculine by termination'? How are diminutives formed with gender suffixes?

5. (a) Explain the formation of any eight of the following words:—

मेला, ऊन, पावस, तांबा, अयान, सियाना, माखी, अवसि, पीजियो, बुढ़ापन, सुआर, कापूत ।

(b) Explain the formation of any six of the following sentences:—

इदमिथं कहि न जाए (Rāmcārītmanāsa),  
 भे न भाइ अहहिं न होने (Rām.),  
 जागउ नृप अनभयउ विहाना,  
 पेड़ों और पशुपक्षियों ने भी उदासी मानी,  
 पूछि लोगन्ह काह उछाहु,  
 तब रघुबीर कहा मुनि पाहीं,  
 पदनख ते भू खोदत भई,  
 मो वै चलयौ नहीं जातु ।

## SECOND HALF

*Examiner*—MR. BASNTAKUMAR CHATTERJI, M.A.

*The questions are of equal value*

*Attempt ANY THREE questions*

1. What is the line of development of Old Indo-Aryan (Vedic) into High Hindi? Indicate and characterise each of the distinct stages in the history of this development, and illustrate your answer with suitable examples of words and forms.



2. What do you understand by 'Hindi dialects'? Are Marwari, Garhwali, Bhojpuriya, and Magahi to be regarded as dialects of 'Hindi'? State your reasons, and indicate (preferably by means of a genealogical table) the mutual relationship of the Indo-Aryan speeches of the 'Hindi area.'

3. Give a brief historical sketch of the origin and development of the *Khari-Boli* (High Hindi), and explain its connexion with the local dialects and with Urdu.

4. How did the final vowels of Middle Indo-Aryan (Prakrit) behave in Hindi? Write also notes on the equivalents of क्ष, झ, ञ, in Hindi *tadbhava* words, and on the pronunciation of the above letters in Modern Hindi.

5. What are the *authentic* remains of Hindi literature (in both Eastern Hindi and Western Hindi) prior to 1550 After Christ? In this connexion discuss also the nature of the language of the *Prithvirāja Rāsa* and the question of its genuineness as 12th-13th century work.

## COMPARATIVE PHILOLOGY

### FIRST PAPER

*Examiner*—MR. SUKUMAR SEN, M.A.

*The figures in the margin indicate full marks*

1. Write a short essay on the philological study of the modern Indo-Aryan Vernaculars. 15

2. Estimate the contribution of *any four* of the following persons to the science of Comparative Philology :— 10

Alexander Hamilton, Erasmus Rask, Karl Brugmann, Hermann Osthoff, Berthold Delbrück, Antoine Meillet.

*Or,*

What do you know about the *Junggrammatiker*? What were their chief tenets? 10

3. What is a language? How do you differentiate it from a dialect? Explain the growth of a language. 15

*Or,*

'Language is in a state of continuous flux.' Explain and illustrate. 15

4. What are the different principles of classifying languages? Which do you think to be the best? Are there any drawbacks? Discuss fully. 15

5. Assign to the proper family and branch *any five* of the following languages :— 10

Brahui, Basque, Coptic, Doric, Etruscan, Hebrew, Kafir, Magyar, Maya, *Osmanli*.

*Or,*

State the main characteristics of the Chinese family of languages. 10

6. Write short notes on *any five* of the following terms :— 15

Haplogy, Folk-etymology, Back-formation, Semitatsama, Secondary derivative, Vowel-harmony, Fossil word.

*Or,*

Write a brief essay on Analogy.

15

7. What is Expansion of Meaning? Why is it a comparatively rare phenomenon in semantics? Adduce as many examples as you can. 10

Or,

Write semantic notes on any four of the following words :— 10

(English) *fee, think, meat*;

(Sanskrit) *māsa, sundara, dampatī*.

8. 'Not a few words of the everyday vocabulary are faded metaphors.' Explain and illustrate. 10

Or,

Can you give half a dozen examples of proper names that have become common nouns? How do you explain this phenomenon? 10

### SECOND PAPER

Examiner—PROF. I. J. S. TARAPOREWALA., B.A., PH.D.,

*The figures in the margin indicate full marks*

*Answer the FIRST question and ANY FIVE of the remainder*

1. Discuss fully how sounds may be classified into the various classes. Illustrate with the sounds in Sanskrit. 25
2. Write a note on sonants. discussing the question of 'long sonants.' Discuss the position of ऋ and ॠ in Indian languages. 15
3. What part have the following four played in the development of Prakrit and Vernacular sounds?—  
Assimilation, Dissimilation, Metathesis, and *Svarabhakti*. 15
4. What are 'spirants'? Compare the spirant sounds in Avesta and in Sanskrit. How do spirants differ from 'explosives'? Illustrate with examples. 15
5. Write a note on the words denoting relationships (by blood as well as by marriage) which are common to the various I.-E. languages. What light can these words throw upon the social relations of the ancient people? 15
6. What are the main difficulties in getting a clear idea of the plants and animals known to the speakers of the I.-E. *Ursprache*? What animals were unknown to these people even though their names are to be found in almost every branch of the I.-E. language? 15
7. Discuss the question of the origin of the Brahmi alphabet. 15
8. What are the chances of the Roman script being adopted in India and in China? 15

### THIRD PAPER

Examiner—MR. KSHITIS CHANDRA CHATTERJEE, M.A.

*The figures in the margin indicate full marks*

*Answer Question 1 and ANY FIVE of the rest*

1. Discuss the origin of the **सुप्** and **तिङ्** terminations in Sanskrit. 20
2. Write a note on the *sandhi*-system in Sanskrit and some other I.-E. languages, ancient and modern. 16

3. State the peculiarities of the pronominal declension. Explain the forms **मम, अस्माकम्, यूयम्** and **युष्माभिः**. 16
4. Write a note on the degrees of comparison in the I.-E. languages, with special reference to Sanskrit. Comment on : (a) a king whose memory of all others we most adore ; (b) the most unkindest cut of all ; (c) **अजातशत्रुमूर्खेभ्यो मृताजातौ सुतौ वरम्** ; (d) **युधिष्ठिरः श्रेष्ठतमः कुरुणाम्** ; and **मानुतरा**. 16
5. Trace the history of the Infinitive Mood in Sanskrit from the earliest Vedic period down to classical Sanskrit. 16
6. Write notes on any three of the following : (a) the Vedic subjunctive ; (b) the aorist ; (c) the periphrastic perfect ; and (d) the future passive participle. 16
7. Mention the principal rules for the accentuation of verbs in Vedic. 16
8. Write a note on Sanskrit compounds. 16

#### FOURTH PAPER

Examiner—MR. BASANTAKUMAR CHATTERJEE, M.A.

*The questions are of equal value*

*Answer ANY SIX*

1. Explain and illustrate with suitable examples the treatment of final consonants of Sanskrit words in Middle Indo-Aryan.
2. What are the different sounds that sprang out of the old *r*-vowel in Middle Indo-Aryan? Illustrate.
3. 'Prākṛit is tolerant of hiatus, but not in compounds.' Criticise this statement with illustrations. Give the more important rules of *Sandhi* of vowels and consonants in Prākṛit.
4. Estimate the importance of the inscriptions of Asoka from linguistic point of view. How many different dialects do you discover in these inscriptions? Give the main characteristics of the official dialect of Asoka.
5. Give a tabular representation of the origin of the following dialects from Old Indo-Aryan :—

Māgadhi, Ardha-māgadhi, Śaurasenī Apabhraṃśa,

6. Give a short account of the Jaina canonical literature.

7. Write short notes on any five of the following :—

The dramatic Prākṛits the Br̥hatkathā, the Gāthā language, the Sutanukā inscription, Prākṛitisms in Old Indo-Aryan, Prothesis, and Metathesis.

8. Give the English translation of any one of the following extracts with notes on the italicized words :—

(a) *Amiam pāṭa-kavvam*  
*paḍhum soup a ṭe ṇa āṇanti,*  
*Kāmasa tatta-tantim*  
*kuṇanti, te kaha ṇa lajjanti?*  
*Satta saṇṇu kai-vaccheṇa kodā majjhaārammi,*  
*Hāḷeṇa viraiṇim sūlaṅkāraṇa gāhāṇam.*  
*Ua niccala-nipphamḍ bhivṇi-vattammī rehaī balāṇ,*  
*nimmala-maragaa-bhāṇa-pariṭṭhiā sampkhasutti vva.*

(b) Aho-salila-sitta-majjida-kida-haridovalevanassa vihiha-suandhi-kusumo-vahāra-citta-libhida-bhūmi-bhāssa gaṇa-talāloṇa-koduhhala-dūruṇṇāmida sisassa dōlāmāṇṣvalambid-*Erāvaṇa*-hattha-bbhaṇāida-mallā-dāma-guṇēlam-kidassa sa-mu chida-danti-toraṇāvbbhāsidadassa mahāraṇovaraṇova-ohiṇā pavāṇa balandolaṇṇālanta-cañcal'-aggahattheṇa 'ido ehi' *tti* vāharantēṇa via maṇṇ sohaḡa-paṭṭā-nivaheṇovasohidassa torana-dharaṇa-tthambha-vedā-ṇikkhitta-samullasanta--harida--cūoa--pallava--lalīma--phaṭṭha.maṇḡala---kalasābhīrāmohasa-pāsassa mahāsura-bakkha-tthala-dubbhejja-vajja.ṇirantara-paḡibaddha--kaṇasa kavāḡassa duggada-jaṇa-maṇo-rahāssa-karassa Vasaṇtasenā-bhavaṇa-duāraassa saasiriḡadā ! Jap saccam majhatthassa vi jaṇassa balā dīṭṭhim āāredi.

9. Translate into English and comment on the italicized words and expressions :—

Namo Arahantānaṃ ! Namo savva-Siddhānaṃ ! Verena mahārājena mahāmeghavāhanena Ceta-rāja-vassa-vaddha-nena *pasattha*-subhalakkhanena catur-antala-ṭṭāna-guṇopaga-tena Kaliṅgādhipatinā siri-Khāra-velena *pandarasa* vassāni siri-kumāra-sariravatā kiḡitā Kumāra-kiḡakā.

Tuto lekha-rūpa-ganana-vavahāra-vidhi-visāradena savva-vijjāvadātena nava vassāni *yovvarājan* pasāsitaṃ.

Saṃpuṇṇa-catu *visati*-vasso ca dānava-dhammena sesa-yovvanābhivijaya-vattiye Kaliṅga-rāja-vassa-purisa-yuge mahārājābhisecanaṃ *pāpunāti*.

Abhisittamatto ca *padhama*-vasse vāta-vihata-gopura-pākāra-nivesanaṃ paṭisarpkhārayati Kaliṅga-nagarin *khīṭiraṇ* ca sitala-taḡāga-pāḡiyo ca *bandhāpayati*.

## FIFTH PAPER

### HISTORICAL AND COMPARATIVE GRAMMAR OF MODERN INDO-ARYAN (BENGALI)

Examiner—PANDIT VIDHUSEKHAR SASTRI

*The questions are of equal value*

*Attempt ANY SIX questions*

1. Discuss historically, giving apt examples, the treatment in late MIA. and early NIA. of OIA. vowels in entire or partial contact (*udvṛta*) by elision of stops, tracing back the use of hiatus and vowel groups in OIA.

2. Relate broad lines of the story of the development of the Indo-Aryan speech, briefly noting its main characteristics in different periods.

3. Discuss the intervocal stops in MIA. and NIA.

4. (i) Write a note on the treatment of OIA. *r* (ऋ) with special reference to Bengali, showing its modifications in MIA. ; and discuss whether its modern pronunciations as *ri* or *ru* in different parts of the country can be traced back in any stage or stages of the Indo-Aryan speech.

(ii) Write phonetically, preferably using phonetic symbols, the folk pronunciations of the word *amṛta* (अमृत) in Bengali.

5. Explain and illustrate from Bengali :—

Intrusive Vowels, Epenthesis, Umlaut, and Spontaneous Nasalisation.

6. Discuss the stress system of Bengali in its different periods, giving examples which must be explained.

7. Write a historical account of foreign elements in Bengali, giving examples.

8. Discuss Aspiration and Deaspiration in NIA.

9. Find out the roots as well as the earliest and the succeeding forms of the following :—

হে, হোএ, হএ, হয়, নয়, নহিব, রহে, and আছে।

10. Write derivative notes on any eight of the following words :—

গোরাড়ী, আড়াই, তেওট, আজবুখ, টান্দা (subscription), হাঁদা, ভাগর, গাবরাট, বয়ড়া, ফড়িং, খিচুড়ী, খামার, আইচ, দাঁতন, ছি, and ছোট।

### SIXTH PAPER

*Examiner*—MR. P. C. GHOSH, M.A.

*The figure in the margin indicates full marks*

Write essays on two of the following subjects :—

100

- (a) Linguistic Palæontology.
- (b) Importance of the study of Dialects.
- (c) 'Words are fossil history.'
- (d) Need for an International Language. (Examine in this connection the adequacy or otherwise of any one of the proposed International languages.)
- (e) Influence of analogy on the formation of words.
- (f) The respective claims of Hindi and English as the future common language for Indian people.

### INDO-ARYAN BRANCH

#### SEVENTH PAPER

ALTERNATIVE A : INDO-IRANIAN PHILOLOGY, WITH ELEMENTS  
OF AVESTAN AND OLD PERSIAN

#### FIRST HALF

*Examiner*—PROF. S. K. CHATTERJI, M.A., D.LIT.

INDO-IRANIAN PHILOLOGY : 50 marks

(The questions are of equal value : select only THREE questions in this half)

1. Classify the languages and dialects (ancient, mediæval, and modern) in the Iranian group, and discuss the position of Avestan and Old Persian in that group. Note also the points in which Avestan and Old Persian differ from each other.

2. Discuss the treatment of the Indo-European voiced stops and aspirates in Iranian, adducing examples. Explain also Bartholomae's Law.

3. Decline three of the following nouns : *daenā* (Avestan), *gōiri* (Avestan), *martiya* (Old Persian), *berezant* (Avestan), *dātar* (Avestan), *huddāh* (Avestan).

4. Conjugate two of the following roots in Avestan or Old Persian, giving Sanskrit (Vedic) equivalents : *bar* in Subjunctive Active (Avestan), *ah* in Indicative Present Active (Old Persian), *mrū* in Indicative Present Middle (Avestan), *dā* in Aorist Active (Avestan), *kar* in Indicative Present Active (Avestan).

5. Give Old Iranian (Avestan or Old Persian) as well as Indo-Iranian (Aryan) equivalents of eight of the following Sanskrit words, with phonological notes : *edhi*, *dehi*, *sahasra*, *gacchāmi*, *uśasām*, *yajāmahe*, *dīrgha*, *aham*, *nēdīyas*, *martya*, *apṛccham śaṃsati*, *tiṣṭhati*, *vrkāya*, *vasiṣṭha kṣarati*.

6. Give a Sanskrit rendering of, or write a philological commentary on, one of the following passages (use in your Sanskrit version equivalent or cognate forms wherever possible) :—

(i) āat aoxta Zaratustrō : 'nēmō Haomāi! vanhus Haomō,  
hūdātō Haomō, arsdātō, vanhus-dātō, baēšazyō,  
hukerefs, hvarəs verəθra:jā, zairi-gaonō nāmyāsus;  
yaθa xvarənte vahistō urunaē ca pāθmainyō-tēmō.'

(ii) kē verəθrem-jā θwā pōi sēnghā yōi hēnti?  
ciθrā mōi dām ahūm-bis-ratūm ciθdī;  
at hōi Vohū Sərəoθō jantū Mananhā,  
Mazdā, ahmāi yahmāi vaši kahmāi-cit.

(iii) avahyā Kambujiyahyā brātā Bardiya nāma āha, hamātā hamapit-Kambujiyahyā pasāva Kābujīya avam Bardiya avāja (=slew) yaθā Kamā bujiya Bardiya avāja, kārahya (=of the people) azdā (=certainty) abava, tya Bardiya avajata.

7. Sanskrit (Vedic) and Avestan (Gathic) : discuss their affinity, and also their relative importance in reconstructing the Aryan or Indo-Iranian speech. Note some of the more important points of disagreement between these.

## SECOND HALF

Examiner—PROF. I. J. S. TARAPOREWALA, B.A., PH.D.

AVESTAN : 50 marks

The figures in the margin indicate full marks

Answer Question 1 and ANY TWO of the rest

1. Translate into English the following two passages :—

20

(a) nī-tē, zāire, maθəm mruyē,  
nī aməm, nī verəθra:nəm,  
nī dasvare, nī baēšazəm,  
nī fradaθəm, nī verədaθəm,  
nī aoiō vispo-tanum,  
nī mastīm vispō-paēsanhəm;  
nī tat yaθa gaēθāhva  
vasō xθrō fracarāne,  
tbaēθō-taurva, drujəm-vanō.

Point out the compounds in the above passage and give their nearest Sanskrit equivalents. Also state in what important points the compounds in Avesta differ from those in Sanskrit.

(b) aθā aθā cōit Zaraθustrō daēvāis sarəm vyāmrvitā, vīspaēṣū vīspaēṣū hanjamanaēṣu, yōis apərə saētəm Mazdācā Zaraθustras-cā.

aθā azəm-cit yō mazdayasnō zaraθustris daēvāis sareṃ vīmruyē, yaθā anāis vyāmrvitā yē aṣavā Zaraθustrō.

What is the function of the *Ātmanepada* in the Avesta? Compare its use in the Avesta with that in Greek and in Sanskrit (both Vedic and later).

2. Write a note on Sraoṣa and on the position he occupies in the Iranian pantheon. 15

3. Write a note on *ahura-* and *daēva-* words. Do these point to any religious quarrel between the Hindus and the Zoroastrians in ancient times? Give reasons for your opinion. 15

4. Describe in some detail the literature found in Old Iranian. Point out the relative importance (linguistical as also cultural) of the two main branches of Old Iranian. 15

5. Write short notes on three of the following :— 15

The five *Gāhs*, the *Gāθās* of Zaraθustra, the *Yazatas* and the *Fravatis*.

## EIGHTH PAPER

### ALTERNATIVE A : INDO-EUROPEAN PHILOLOGY, WITH ELEMENTS OF GREEK

Examiners—{MR. K. C. MUKHERJI, M.A.  
PROF. S. K. CHATTERJI, M.A., D.LIT.

#### PART I : INDO-EUROPEAN PHILOLOGY : 50 MARKS

Answer THREE questions only in this part

The questions are of equal value

1. Classify the consonant sounds of Indo-European, and indicate briefly the modification of the Indo-European spirant sounds in Greek and in Sanskrit.

2. Write a note on the dual number in Indo-European. Give also the case affixes for the Indo-European nouns in -o-, masculine, in the three numbers.

3. Write a note on the moods and voices of the Indo-European verb.

4. Conjugate three of the following roots of Indo-European, all in the active voice :—

\*ei in the Present Indicative; \*es in the Imperfect; \*derk or \*weid in the Perfect; \*bher in the Optative; \*es in the Optative; \*dō in the Future.

5. Explain the formation of eight of the following Greek words, giving Indo-European and Sanskrit (Vedic) equivalents :—

βάσις, ῥέϊ, ἄμβροτος, ἐκατόμβη, λείπω, βαρύς, βίος, βιός, θερμός, νυός, στατός, ἄνδρα, θυγάτηρ, δώσουσι, τέτταρες, ἀνδροφόνοιο, εἰδώς, ἡδυεπής, ὠκύμορος, νηυσί, τιθεῖ, ἐοῦσα, ὕπνος, ἡμεῖς.

## PART II : ELEMENTS OF GREEK (HOMERIC GREEK, ILIAD,

## BOOK I): 50 MARKS

Answer Question 1, which is compulsory, and ANY TWO others from among the rest

1. Render into English any three of the following passages :—

30

- (a) " Ἀτρεΐδῃ, νῦν ἄμμε πάλιν πλαγχθέντας οἶω  
 ἄν' ἀπονοστήσειν, εἴ κεν θάνατόν γε φύγοιμεν,  
 εἰ δὴ ὁμοῦ πόλεμός τε δομᾷ καὶ λοιμὸς Ἀχαιούς.  
 ἀλλ' ἄγε δὴ τινα μάντιν ἐρείομεν ἢ ἱερῇα  
 ἢ καὶ ὀνειροπόλον, καὶ γάρ τ' ὄναρ ἐκ Διὸς ἔστιν,  
 ὃς κ' εἴποι, ὅτι τόσσον ἐχώσατο Φοῖβος Ἀπόλλων,  
 εἰ τ' ἄρ' ὁ γ' εὐχολῆς ἐπιμέμφεται εἰ θ' ἐκατόμβης,  
 αἶ κέν πως ἀρνῶν κνίσσης αἰγῶν τε τελείων  
 βούλεται ἀντιάσας ἡμῖν ἀπὸ λαιγὸν ἀμῦναι."
- (b) τὸν δ' ἡμρίζετ' ἔπειτα ποδάρκης δῖος Ἀχιλλεύς·  
 " Ἀτρεΐδῃ, κύδιστε, φιλοκτεανώτατε πάντων,  
 πῶς γάρ τοι δώσουσι γέρας μεγάλθυμοι Ἀχαιοί ;  
 οὐδέ τί που ἔδμεν ξυνήια κείμενα πολλά,  
 ἀλλὰ τὰ μὲν πολίων ἐξεπράθομεν, τὰ δέδασται,  
 λσοὺς δ' οὐκ ἐπέοικε παλὶλλογα ταῦτ' ἐπαγείρειν.  
 ἀλλὰ σὺ μὲν νῦν τήνδε θεῶν πρόσες, αὐτὰρ Ἀχαιοὶ  
 τριπλῇ τετραπλῇ τ' ἀποτίσομεν, αἶ κέ ποθι Ζεὺς  
 δῶσι πόλιν Τροίην εὐτείχεον ἐξαλαπάξαι."
- (c) ὣς φάτο Πηλεΐδης, ποτὶ δὲ σκῆπτρον βάλε γαίῃ  
 χρυσεῖσις ἥλοισι πεπαρμένον, ἔζετο δ' αὐτός.  
 Ἀτρεΐδης δ' ἐτέρωθεν ἐμήνιε. τοῖσι δὲ Νέστορ  
 ἡδυεπὴς ἀνόρουσε, λιγύς Πυλίων ἀγορητής,  
 τοῦ καὶ ἀπὸ γλώσσης μέλιτος γλυκίων ρέεν αὐδή.  
 τῷ δ' ἦδη δύο μὲν γενεαὶ μερόπων ἀνθρώπων  
 ἐφθίεθ' οἱ οἱ πρόσθεν ἅμα τράφεν ἡδὲ γέγοντο  
 ἐν Πύλῳ ἡγαθέῃ, μετὰ δὲ τριτάτοισιν ἀνασσειν.  
 ὁ σφιν ἐν φρονέων ἀγορήσατο καὶ μετέειπεν.
- (d) αὐτὰρ ὁ ἔγνω ᾗσιν ἐνὶ φρεσὶ φώνησέν τε.  
 " Χαίρετε, κῆρυκες, Διὸς ἄγγελοι ἡδὲ καὶ ἀνδρῶν·  
 ἄσπον ἔτ'. οὐ τί μοι ὕμμες ἐπαίτιοι, ἀλλ' Ἀγαμέμνων,  
 ὁ σφῶι προΐει Βρισηΐδος εἵνεκα κούρης.  
 ἀλλ' ἄγε, διογενὲς Πατρόκλεις, ἔξαγε κούρην  
 καὶ σφωιν δὸς ἄγειν. τῷ δ' αὐτῷ μάρτυροι ἔστων  
 πρὸς τε θεῶν μακάρων πηὶς τε θνητῶν ἀνθρώπων  
 καὶ πρὸς τοῦ βασιλῆος ἀπηνέος, εἰ ποτε δὴ αὐτε  
 χρειῶ ἐμεῖο γένηται ἀεικέα λαιγὸν ἀμῦναι  
 τοῖς ἄλλοις. . . . ."



- (e) τὸν δ' ἡμίβητ' ἔπειτα βοῶπις πότνια Ἥρη  
 "αἰνότατε Κρονίδη, ποῖον τὸν μῦθον ξείπες.  
 καὶ λίην σε πάρος γ' οὐτ' εἶρομαι οὔτε μεταλλῶ,  
 ἀλλὰ μάλ' εὐκηλος τὰ φράζεαι, ἄσπ' ἐθέλησθα.  
 νῦν δ' αἰνῶς δειδοῖκα κατὰ φρένα, μή σε παρείπῃ  
 ἄργυρόπεζα Θέτις, θυγατρὶ ἀλίοιο γέροντος·  
 ἡερὴ γάρ σοί γε παρίζετο καὶ λάβε γούνων·  
 τῇ τ' οἶω κατανεῦσαι ἐτήτυμιον, ὥς Ἀχιλλῆα  
 τιμῆσεις, ἐλέσεις δὲ πολέας ἐπὶ νηυσὶν Ἀχαιῶν."

2 Write grammatical and other notes on *ten* of the words underlined in the passages in Q. 1 above. 10

3. Decline *two* of the following nouns :— 10  
 νύξ, γέρων, βασιλεύς, ἔπος, λύσας.

4. Give the principal parts of *five* of the following verbs :— 10

ἄγω, βαίνω, ἔρχομαι, ἔχω, φημί, χαίρω, φύω, τίνω, τίθημι, κλέπτω.

5. Give a tabular scheme of the Greek conjugational system. 10  
 6. Homeric Greek and Vedic Sanskrit : discuss their respective position and importance in the reconstruction of Indo-European. 10  
 7. Write a brief appreciation of Iliad I. 10

## HISTORY

### FIRST PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—MR. SANTOSHKUMAR CHATTERJI, M.A.

*Only THREE questions should be attempted*

1. Compare the condition of England—economic, social, and political—in 1815 with that in 1830.
2. Canning insisted upon 'the right of nations to set up over themselves whatever form of government they thought best, and to be left free to manage their own affairs so long as they left other nations to manage theirs'. Show how he sought to apply this principle to the practical problems of his day. Was he completely successful in this?
3. Write a short history of Chartism. What were the causes of its progress and decline? How did the workingmen in England ultimately realise their democratic ambition?
4. Describe the circumstances that led to the outbreak of the Crimean War. Did England 'back the wrong horse' in this war?
5. 'The year 1859 is a turning point in our parliamentary history . . . . It was the parting of the ways, ultimately fraught with momentous consequences, both for good and evil, to the British empire.' (*Low and Sanders*) Elucidate.

## SECOND HALF

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.

*Answer ANY THREE questions*

1. Form a critical estimate of the character and achievements of Benjamin Disraeli.
2. Attempt a vindication of the foreign policy of Gladstone's first ministry.
3. Describe the relations of England with Egypt from 1875 to 1904.
4. Trace the formation and growth of the Labour party in England up to 1906.
5. Explain the nature of the Irish land problem. How did the English ministries seek to solve it in the second half of the 19th century, and with what success?
6. Show how the House of lords has been gradually compelled to yield its position and authority to the House of Commons from 1832 to 1911.

## SECOND PAPER

*The questions are of equal value*

*Attempt only THREE questions from EACH half*

## FIRST HALF

*Examiner*—DR. HEMCHANDRA ROY, M.A., PH.D.

1. Give an account of the foreign invasions of India during the period c. 551-206 B.C. Refer to your sources of information.
2. 'For about three centuries after the extinction of the Andhrabhrtyas, we have no specific information about the dynasties that ruled over the country (Deccan).' Critically examine the statement.
3. Trace the causes that led to the decline and downfall of the Maurya empire.
4. Discuss the different views about the date of Asoka's coronation, noticing particularly the evidence furnished by his inscriptions.
5. Give an account of the alliances and wars of the first three Gupta emperors. Indicate the extent of the empire of Chandragupta II with the aid of a sketch map.
6. 'The death of Harsha gave free scope to a host of petty local dynasties and we cease to feel interest in the history of India till the appearance of the Mussalmans.' To what extent is this statement applicable to the history of Northern India during the period c. 647-900 A.D.?

## SECOND HALF

*Examiner*—DR. RAMESHCHANDRA MAJUMDAR, M.A., PH.D.

1. 'The earliest Buddhist records reveal the survival, side by side, with more or less powerful monarchies, of republics with either complete or modified independence.' Discuss the statement, and illustrate your answer by a sketch-map.

2. Give an account of the economic condition of North-eastern India in the age of Buddha, with special reference to the corporate activities of the work-people and the merchants.

3. Sketch the political and economic condition of the Deccan during the rule of the Sātavāhanas.

4. Review the religious condition of the Deccan under the Sātavāhana and the Chalukya dynasties.

Trace, in broad outline, the general system of administration in India as depicted by Kautilya.

### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. INDUBHUSAN BANERJEE, M.A.

*THREE questions to be attempted*

1. Comment on any three of the following :—

(a) 'My Majesty hath set up an image of my Majesty upon this frontier which my Majesty makes, not from a desire that ye should worship it, but from a desire that ye should fight for it.'

(b) 'His Majesty ordered the whole army to march upon the narrow road. His Majesty swore : "None shall go forth in the way before my Majesty". He went forth at the head of his army himself, shewing the way by his own footsteps; horse behind horse, His Majesty being at the head of the army.'

(c) 'Now Canaan is thy land, and thou art the king. I have been violently dealt with in thy land : subdue these people. Make good the money they have stolen, and as for the people who killed my servants, kill them, and avenge their blood.'

(d) 'Woe to him who attacks thee, O Amen ! Thy city endures, but he who assails thee is overthrown. The sun of him who knew thee not has set, but he who knows thee shines. The sanctuary of him who assailed thee is overwhelmed in darkness, but the whole earth is light !'

(e) 'Who could have plundered Tunip in the old days without being plundered by Manakhbiria?'

2. Write a brief sketch of the civilisation of Egypt under the Old Kingdom. To what extent was it inspired by external influences?

3. 'The rule of the XIIth Dynasty marked a veritable renaissance of the kingdom.'

*Elucidate.*

4. 'The Biblical account of the Exodus is the Hebrew version of the Expulsion of the Hyksos.'

*Examine.*

5. Explain fully the circumstances that led to the religious revelation of Ikhnaton. Why did the movement fail?

6. Write notes on any four of the following :—

- (a) Manetho.
- (b) The Rosetta Stone.
- (c) Uni.
- (d) The Adventures of Sinuhe.
- (e) The Coffin Texts.
- (f) The Report of Wenamon.
- (g) The Harris Papyrus.

### SECOND HALF

Examiner—MR. P. N. BANERJI, M.A., B.L., BARRISTER-AT-LAW.

Candidates are permitted to answer THREE questions and THREE questions only from this half

1. ' Babylonian religion based on an animistic starting point rose to the level of personification of some specific power or manifestation of nature.' (Rogers.)

Discuss.

2. ' Solomon was no " Roi des Gueux " like Saul, no successful *condottiere* like David.' (Hall.)

Expand.

3. Illustrate from your study of the Code of Hammurabi (i) the application of the principle of *lex talionis*, (ii) want of proportion between crime and penalty (iii) independent position of women in society.

4. Could you draw a parallel between the Babylonian dialogue of Pessimism and Egyptian didactic poems of the Eloquent Peasant and the Admonitions of an Egyptian Sage?

Or,

Give a connected account of Iranian religion.

5. (a) What are your chief sources for the reconstruction of the reign of Tiglath-pileser IV?

(b) Give an account of his policy towards (i) Urartu, (ii) Syria, (iii) Babylonia.

6. Write notes on any two of the following :—

- (a) The Moabite Stone.
- (b) The Kassites.
- (c) The Sumerian-Dravidian theory of Hall.
- (d) The Persian Imperial Organisation.

7. Comment on the following :—

(a) ' What confidence is this wherein thou trustest? . . . Now on whom dost thou trust. that thou rebellest against me? Now, behold thou trustest upon this stuff of this bruised reed, even upon Egypt, on which if a man lean, it will go into his hand and pierce it.'

(b) ' Gilgamesh, full be thy belly,  
Each day and night be thou merry and aye hold holiday revel,  
Let thou thy head be clean shaven and bathe and  
Holding thy hand, the little one cherish  
And let also thy spouse be rejoiced in thy bosom  
This is the mission of man.

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—MR. K. ZACHARIAH, M.A.*

*Answer ANY THREE*

1. Comment on *any four* of the following :—

(a) I permit and confirm justice and power over ecclesiastical persons and all clerks .....to be in the hands of the bishops. (*Second Charter of Stephen.*)

(b) If any one shall have been accused before the justices of the lord king.....by the oath of twelve knights of the hundred.....and if he shall have been to the water whole he shall furnish sureties and remain in the kingdom, unless he has been accused of murder or other infamous felony.

(*Assize of Northampton.*)

(c) No freeman shall be taken or imprisoned.....except by the legal judgment of his peers or by the law of the land. (*Magna Carta.*)

(d) The like of the chancellor. That he at the end of the year answer concerning his time. And that he seal nothing out of course by the sole will of the king. (*Provisions of Oxford.*)

(e) Moreover, the said knights are to have full and sufficient power for themselves and for the community of the aforesaid county.....so that the aforesaid business shall not remain unfinished in any way for defect of this power. (*Writ of Summons to Model Parliament.*)

(f) Nothing from henceforth shall be taken in the name or by occasion of maletote. (*De Tallagio non Concedendo.*)

(g) That Englishry and presentment of the same be wholly out and void forever, so that no person by this cause may be from henceforth impeached.

(*Statute of 1340.*)

(h) Whereas divers opinions have been before this time what case should be adjudged treason and what not ; the king, at the request of the lords and of the commons, hath made a declaration in the manner as hereafter followeth.

(*Statute of 1352.*)

2. Account for the growth of private jurisdictions in the later Anglo-Saxon period.

3. Discuss the statement that the most important constitutional result of the Norman Conquest was to remove the obstacles in the way of royal supremacy. What checks were there on the Norman king ?

4. Explain exactly how the Jury worked at the end of the 12th century, and estimate the value of the Jury System in the history of constitutional and judicial development.

5. Describe the growth and working of the organs of financial administration in the Middle Ages.

6. In what sense does the reign of Edward II mark a turning-point in English constitutional history ?

7. Assess the contribution of (a) Montfort's Parliament of 1265, (b) the Model Parliament, (c) the Good Parliament, to the development of the form and functions of Parliament.

8. Discuss critically the succession to the throne between 1215 and 1603, bringing out its constitutional significance.

9. What influence did the church or churchmen exercise on the growth of the Constitution in the Middle Ages ?

## SECOND HALF

Examiner—MR. TRIPURARI CHAKRABARTI, M.A.

Answer ANY THREE

1. Comment on *any four* of the following :—

(a) The most high and absolute power of the realm of England consisteth in the Parliament. (*Sir Thomas Smith*.)

(b) The authority of the Star Chamber, which before subsisted by the ancient common laws of the realm, was confirmed in certain cases by Act of Parliament. (*Bacon*).

(c) Thirdly and lastly, that the examination of the return of writs for knights and burgesses is without our compass and due to the chancery. (*Apology of the House of Commons*, 1604.)

(d) The profession of both Houses, in time of hammering this Petition, was no ways to intrench upon my prerogative, saying, they had neither intention nor power to hurt it. (*Charles's Speech in proroguing Parliament*, 26 June, 1628).

(e) It may often fall out that the Commons may have just cause to take exceptions at some men for being councillors, and yet not charge those men with crimes, for there be grounds of diffidence which lie not in proof. (*The Grand Remonstrance*, 1641.)

(f) It is an inseparable prerogative in the kings of England, to dispense with penal laws in particular cases, and upon particular necessary reasons. (*Chief Justice Herbert in the case of Godden v. Hales*, 1686.)

(g) That neither House of Parliament has a power separately to dispose of the liberty or property of the people, for that cannot be done but by the Queen, Lords, and Commons. (*Chief Justice Holt in the case of the Aylesbury Men*).

(h) That it is necessary to declare that the influence of the Crown has increased, is increasing, and ought to be diminished. (*Dunning's Resolution*, April 6, 1780).

2. Explain carefully the development in composition and in powers of the Privy Council under the Tudors.

3. What is the constitutional significance of the reign of Queen Elizabeth in the history of Parliament ?

4. Explain the royalist view as to the position of the prerogative in the State during the reigns of James I and Charles I.

5. How far was the Restoration really a return to conditions before the Civil War ?

6. Discuss the plan of the Second Stuart Despotism. To what extent was it successful by 1685 ?

7. Sketch the development and the political ideas of the Whig Party from 1678 to 1760.

8. What were the limitations to the liberty of the subject in England during the first half of the reign of George III ?

9. Trace the evolution of the Prime Minister and the doctrine of Cabinet Solidarity in the 19th and 20th centuries.

## FIFTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. SATISCHANDRA CHAKRABARTI, M.A.*Answer ANY THREE*

1. Discuss the relation between International Law and Municipal Law. 'The Law of Nations to its whole extent is part of the Law of England.' Examine the soundness of this view.

2. To what extent is a State responsible for injuries done to foreigners within its territory? Discuss this question fully, noting relevant cases.

3. Discuss the reasons for which a treaty may be denounced by a State. Is the doctrine of 'rebus sic stantibus' an accepted principle of International Law?

4. Attempt a classification of the functions of the League of Nations.

'With all its imperfections the League of Nations offers the best and perhaps the only hope of the eventual triumph of law and reason in international relations.' Do you agree?

5. State and annotate any two of the following cases :—

- (i) *The Caroline* (1938).
- (ii) *Porter v. Freudenberg* (1915).
- (iii) *The West Rand Central Goldmining Co., Ltd. v. Rex* (1905).
- (iv) *The Trent* (1861).
- (v) *The Peterhoff* (1866).

## SECOND HALF

*Examiner*—PROF. A. BROWN, M.A., LL.B.*Only THREE questions may be attempted from this half*

1. Write a full note on the various questions pertaining to International Law which are involved in the present Sino-Japanese dispute.

2. Discuss the principle of extritoriality.

3. Write a full note on the conceptions of spheres of interest and influence.

4. Expound the theory of contraband, and discuss the practice of the parties to the Great War.

5. Write a full note on the exercise of military authority, in war, over hostile territory.

## (HISTORY OF BENGAL)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. INDUBHUSHAN BANERJEE, M.A.*Answer ANY THREE of the questions*

1. How far is it true to say that the victory of Plassey made the English masters of Bengal?

2. Give some account of the frontier troubles in Bengal during the reigns of Mir Jafar and Mir Kasim. How did they react on the internal political situation ?

3. Clive's second government 'may indeed be claimed as a miracle of insight, vigour, prudence, and honesty.' Do you agree ?

4. Show how the troubles of Bengal from 1765 to 1772 were due to the inherent defects of the new government machinery.

5. Was Maharaja Nandakumar the victim of a conspiracy between the judges and the governor-general ?

## SECOND HALF

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.

*Answer ANY THREE of the questions*

1. Briefly describe the Company's relations with Oudh from 1765 to 1784.
2. Show that the quarrel between Warren Hastings and Philip Francis was not only personal but also a clash of ideals and objectives.
3. Discuss the conflict of jurisdiction between the Supreme Court and the Supreme Council which arose out of the Regulating Act.
4. Show how in his judicial reforms Cornwallis continued the policy of Hastings.
5. Trace the history of the district officer in Bengal from 1772 to 1793.

## SEVENTH PAPER

*Examiner*—DR. SUBODHCHANDRA MUKHERJEE, M.A., D.LITT.

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE of the questions*

1. Compare the revenue reforms of Cornwallis with those of Warren Hastings, bringing out clearly the fundamental ideas on which they were based.
2. Write a historical note on the Permanent Settlement of Bengal, clearly indicating the necessity for the settlement and the effects of the settlement.
3. Describe the reforms introduced by Lord Clive in 1765, and criticise them in the light of their historical consequences.
4. Describe the policy pursued by the East India Company about the indigenous industries of Bengal after the grant of the Dewani and the economic consequences of the same.
5. Write notes on :—

Dustan, Five Years' Settlement, Salt and opium monopoly, Muhammad Rezakhan, The great famine of 1770



## SECOND HALF

*Examiner*—MR. MRINALKANTI BOSE, M.A.*Answer ANY THREE questions*

1. Give a short history of the development of the Press in Bengal during the last half of the eighteenth century.

2. Write a short note on particulars with reference to the period 1757-1793 :—

(a) Educational institutions in Bengal; (b) Ship-building; (c) Business and social relations between Europeans and Indians.

3. Give a short account of the export and import trade of Bengal during the last half of the eighteenth century. What were the causes of the decline of export?

4. 'Until 1772 Bengal was regarded by the British public in the light of a vast warehouse in which a number of adventurous Englishmen carried on business with great profit and on enormous scale.' (*Hunter*.) Critically examine the statement with reference to the state of things prevailing between 1765 and 1772.

5. Write a short history of the banks and of the banking system in Bengal during the last half of the eighteenth century.

## (RAJPUTS)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—PROF. D. R. BHANDARKAR, M.A., PH.D.*Attempt THREE questions only*

1. Write a critical note on the career of *Bidā*, king of 'Khajuraho,' with special reference to his relations with —

- (a) the Gurjara-Pratihāras of Kanauj,
- (b) the Kacchapaśhātas of Gwalior, and
- (c) the Yamīnī of Ghazni.

2. Trace the causes that led to the decline and downfall of the Gurjara-Pratihāra empire. What were the powers that sprang up on its ruins? Illustrate your answer with the aid of a sketch map.

3. Give a critical account of the history of the Caulukyās (*Solankis*) of Anshilanāṭśaka during the period of c. 1200 to 1261 A.D. with special reference to the part played by Vastupāla and Tejapāla.

4. Write a note on the Cāhamānas of Naddūla.

5. Could you give a brief account of the literature and art produced in the Rajput kingdom during the period c. 980 to 1308 A.D.

## SECOND HALF

*Examiner*—DR. H. C. RAY, M.A., PH.D.

*Attempt THREE questions only*

1. Give an account of the Gāhaḍavālas of Vārāṇasī and Kānyakubja during the period c. 1155 to 1197 A.D. Refer to your sources of information.
2. Describe the reigns of the Cāhamāna princes Someśvara and Prthvirāja III, with special reference to their epigraphic records.
3. Write a critical note on the history of the Paramāras during the period c. 1010 to 1087 A.D.
4. Give a brief account of the struggle of the Pratihāras with foreign invaders.
5. Write a note on the life and times of the Dāhala Kalacuri Vikramāditya Gāṅgeyadeva. Indicate by a sketch-map the extent of his dominions.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. SUBIMALCHANDRA DATTA, M.A.

*Attempt THREE questions only*

1. Critically examine the traditional view about the origin of the Guhilotes.
2. What light does the Śāraṇeshwar inscription throw upon the reign and times of the Guhilote prince Allāṭa?
3. Indicate by a reference to the original sources the different attempts that were made by the Sultans of Delhi to conquer Mevād in the thirteenth century A.D.
4. Give a critical account of Rāṇā Sāṅgā's struggles with the contemporary Moslem rulers of North India and their results.
5. What, in your opinion, were the causes of the conflict between Rāṇā Rājasimha and Emperor Aurangzeb? What were its consequences?

## SECOND HALF

*Examiner*—MR. F. J. TARAPOREWALA, M.A.

*Attempt ANY THREE*

1. 'A doubt hangs on the origin of this justly celebrated (Rathore) race.' (Tod.) Has this doubt been removed? What is the modern theory of their origin and how far is it plausible?
2. Discuss critically the reign of Rao Jodha. What was its importance in Rathore history?
3. To what causes do you attribute the failure of Maldeo?
4. 'Had Jaswant Singh's abilities, which were far above mediocrity, been commensurate with his power, credit, and courage, he might, with the concurrent aid of the many powerful enemies of Aurangzeb, have overturned the Mughal throne.' Do you agree with this view?
5. Why was it that in Rajput history the Rathore clan never attained the same pre-eminence as the Guhilotes?

## (HISTORY OF THE MARATHAS)

## SIXTH PAPER

*The questions are of equal value**Only SIX questions, THREE from EACH half, need be attempted*

## FIRST HALF

*Examiner*—PROF. SURENDRANATH SEN, M.A., PH.D.

1. Critically estimate the historical value of the following chronicles : *Sabhasad Bakhar*, *Chitnis Bakhar*, *The Shiva digvijay*, and *Life of the celebrated Sevagy* by Cosmeda Guarda.

2. Do you consider Shivaji and his family to have descended from the solar Kshatriya line of Mewad-Udepur?

3. Can Shivaji be rightly styled as the first national leader of the Marathas?

4. Briefly indicate the constitution of the Ashta Pradhan council. Account for its failure to serve as a check upon the autocratic power of the Chhatrapati and the Peshwa.

5. Why was Shivaji bent upon the conquest of the Sidi of Javjira? State the various stages of the war between them.

## SECOND HALF

*Examiner*—MR. G. S. SARDESAI, B.A.

6. Briefly indicate the main object of Shivaji's Karnatak expedition, and examine the validity of his claims against Ekoji Bhonsla.

7. Give an account of the embassy of Oxinden to the Court of Shivaji and explain the relations which the latter had with the E I Co.

8. How far was Kavi Kalash responsible for the downfall of Sambhaji?

9. Institute a comparison between Santaji Ghorphade and Dhanaji Jadhav as patriots and military leaders.

10. Clearly explain the political relations subsisting between the Maratha State with the Portuguese Government of Goa between 1664 and 1700.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. H. C. RAY CHAUDHURY, M.A., PH.D.*Not more than THREE questions to be attempted*

1. What was the position of the *Chhatrapati* after the death of Shahu I ? Discuss the effect of the administrative innovations introduced by the Peshwas on the stability of the Maratha Empire.

2. Write a critical note on the administration of civil and criminal justice under the third Peshwa and his successors.

8. Form a critical estimate of the achievements of the Maratha fleet under the Peshwas, with special reference to the parts played by Anand Rao Dhulap and Babu Rao Saloo.

4. Attempt a brief survey of the district and provincial governments under the Peshwas.

5. Comment on *any one* of the following passages :—

(a) 'Let us strike at the trunk of the withering tree, the branches must fall of themselves.'

(b) 'Two pearls have been dissolved, twenty-seven gold mohurs have been lost, and of the silver and copper the total cannot be cast up.'

(c) 'The plains of Panipat were not more fatal to the Maratha empire than the early end of this excellent prince (Mahdoo Rao I).'

## SECOND HALF

*Examiner*—TRIPURARI CHAKRAVARTI, M.A.

*Answer ANY THREE question*

1. Discuss Bajji Rao I's claims to the title of 'the second founder of the Maratha Empire.'

2. To what extent was the Panipat disaster a direct result of Balaji Baji Rao's foreign policy ?

3. Discuss the relations of the Marathas with the Nizam during the period from 1761 to 1798 A.D.

4. Estimate the importance of the Krishna-Tungabhadra frontier in the Maratha-Mysore struggle from 1762 to 1792 A.D.

5. How did the quarrel between Daulat Rao Sindhia and Jaswant Rao Holkar react on the central authority of the Maratha State ?

6. Explain the chief clauses of the treaties of Salbye and Bassein, and show their significance in the history of the Marathas.

## (HISTORY OF SIKHS)

### SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—MR. TEJA SING, M.A.

*Answer ANY THREE questions*

8. Discuss the following statement :—

'Nanak combined the excellences of preceding reformers, and he avoided the more grave errors into which they had fallen. (Cunningham.)'

2. What position is occupied by the Guru in Sikhism ? How did it gradually develop in the time of the first six Gurus ?

3. What measures were adopted by the first six Gurus to secularize religion ? Mention any incidents which may show the presence of a civic sense in the Sikhs or Gurus of those days as distinct from a directly religious or communal feeling.

## 4. Comment on the following :—

'It is Arjun, then, who ought to be deemed the first who gave consistent form and order to the religion of the Sikhs.' (*Malcolm.*)

## 5. Examine the following statements and correct any errors of fact which you may find in them :—

- (a) 'Amar Das separated from the regular Sikhs the Udoshi sect, which was founded by Dharom Chand, the son of Nanak, and was probably considered, at that period, as heretical' (*Malcolm.*)
- (b) 'Some Sikh authorities ascribe the foundation of this city [Amritsar] to him [Ram Das], which is not correct, as it was a very ancient town, known formerly under the name of Chak.' (*Malcolm.*)
- (c) 'He [Hargobind] took service under the Emperor Jehangir, but appropriating the pay of his soldiers and refusing to liquidate the fine imposed on his father Arjun, he was made a prisoner and kept in the fortress of Gwalior for twelve years.' (*Irvine.*)

## SECOND HALF

Examiner—MR. INDUBHUSHAN BANERJEE, M.A.

THREE questions to be attempted

## 1. Comment on any two of the following :—

- (a) 'When he put an end to his life for the sake of holy men,  
He gave his head but uttered not a groan.  
He suffered martyrdom for the sake of his religion ;  
He gave his head but swerved not from his determination.  
God's people would be ashamed  
To perform the tricks of mountebanks and cheats.'
- (b) 'The successors of both Baba Nanak and Babar  
Were created by God Himself.  
Recognize the former as a spiritual,  
And the latter as a temporal king.  
Babar's successors shall seize and plunder those  
Who deliver not the Guru's money.'
- (c) 'If any one serve the masands, they will say, "Fetch and give us all thine offerings.  
Go at once and make a present to us of whatever property is in thy house.  
Think on us night and day, and mention not others even by mistake."  
If they hear of any one giving, they run to him even at night, they are not at all pleased at not receiving.'

2. Write an account of the relations between the Sikhs and the Mughal Government from the death of Guru Hargovind to the execution of Guru Tegh Bahadur, bringing out fully the part played by the disappointed candidates for the Guruship.

3. Discuss the chronology of Guru Govind Singh.

4. 'The Sikhism of Nanak died in the hands of Govind.' Discuss the validity of the above statement by examining, in detail, the reform of Guru Govind Singh.

## 5. Write critical comments on any two of the following :—

- (a) The historical value of the Vichitra Natak.
- (b) The relations of Guru Govind Singh with Bahadur Shah.
- (c) The causes of the fall of Banda.

## SEVENTH PAPER

*The questions are of equal value*

*Not more than SIX questions to be attempted, THREE from  
EACH half*

## FIRST HALF

*Examiner*—DR. H. C. RAYCHAUDHURY, M.A., PH.D.

1. Write critical or explanatory notes on *any two* of the following :—
  - (a) 'Coined by the grace of the "Khalsa" in the country of Ahmed, conquered by Jussa the Kullal.'
  - (b) 'Grace, power, and victory, victory without pause, Gooroo Govind Singh obtained from Nanuk.'
  - (c) 'The Sikh system naturally resolved itself into a theocratic confederate feudalism.'
  - (d) 'What had become of the 200,000 spearmen of the Mahrattas?'
2. What special circumstances in the political condition of the Punjab favoured the recrudescence of the Sikh power about the middle of the eighteenth century A.D.?
3. Bring out the salient features in the character of the Sikhs of the 'Misl' period as illustrated by the careers of Taroo Singh, Jussa the Carpenter, Bughel Singh Krora Singhia, and Sudda Kour.
4. Account for the failure of the 'Poolkeeen' Sikhs to weld the Cis-Sutlej States into one compact kingdom which might have acted as a buffer between Ranjit Singh and the British.
5. Write a short history of the 'Bhurghhee' confederacy, with special reference to its relations with (a) the hill rajas, (b) the Afghans, and (c) the 'Sookerchukeen' Sirders.

## SECOND HALF

*Examiner*—MR. INDUBHUSHAN BANERJEE, M.A.

6. "Ranjeet" Singh laboured with more or less of intelligent design to give unity and coherence to diverse atoms and scattered elements.' Estimate the measure of his success.
  7. Write a note on the civil administration of Ranjit Singh. What, in your opinion, were its weak points?
  8. Trace the course of events which led to the Triple Alliance of 1838. How did the Sikhs profit by it?
  9. Give a critical exposition of the Punjab policy of Lord Dalhousie. Examine, in this connection, the justice of Bell's remark that the annexation of the Punjab was 'no conquest, but a violent breach of the trust.'
  10. Write notes on *any four* of the following :—
    - (a) The Battle of Barnala; (b) The Akalis; (c) Adeens Beg; (d) Surbut Khalsa; (e) Sansar Chand; (f) Syed Ahmed Shah; (g) The Sindhanwalas.
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## (CHINA AND JAPAN)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.*Answer ANY THREE questions*

1. What were the causes of the first Anglo-Chinese War ? Describe its effects on the history of China.
2. Discuss the importance of the Taiping Rebellion in Chinese history.
3. Examine the Russian policy towards China from 1895 to 1916.
4. Describe the part played by Tibet in Anglo-Chinese relations during the last quarter of the 19th and the first decade of the 20th centuries.
5. Give an estimate of the character and statesmanship of Li Hung-chang.

## SECOND HALF

*Examiner*—DR. P. C. BAGCHI, M.A., D.LITT.*Answer ANY THREE questions*

6. Show how the Anglo-Japanese Alliance has influenced the history of China in the 20th century.
7. Explain the significance of the Twenty-one Demands in the history of China from 1915 to 1922.
8. Comment on the following :—
  - (a) The Root-Takahira Notes of 1908.
  - (b) The Lansing-Ishii Agreement of 1917.
9. Sketch the history of the constitutional reform movement in China from 1898 to 1908.
10. Write a short essay on the spirit of the Chinese Revolution in the 20th century.

## SEVENTH PAPER

*The questions are of equal value.**Attempt ANY THREE questions from EACH half*

## FIRST HALF

*Examiner*—DR. NARAYANCHANDRA BANARJEE, M.A., PH.D.

1. Enumerate the causes of the downfall of the Tokugawa Shoguns.
2. Form an estimate of the achievements of the early Restoration Government. What was the main issue between the opposing elements among the ministers ?
3. 'The Satsuma rebellion takes on the semblance of a mistaken though loyal movement.' What do you consider to be the more important effects of the rebellion ?
4. Point out the leading features of the Japanese Constitution, showing the amount of authority still vested in the emperor and his ministers.
5. 'Efficient bureaucracy is in some ways the key-stone of the whole present-day civilisation of Japan.' Discuss.

## SECOND HALF

*Examiner*—DR. RAMESCHANDRA MAJUMDAR, M.A., PH.D.

1. Discuss the principles underlying the industrial evolution of modern Japan.
  2. Trace the course of events leading to the annexation of Korea. How far do you justify the policy of Japan?
  3. Write a critical note on Japan's relations with England from 1901 to the present day.
  4. Review the different phases of Japan's Manchurian policy.
  5. Write critical notes on *any two* of the following :—
    - (a) Count Okuma's Pension Scheme.
    - (b) The Genro.
    - (c) Socialistic activities in Japan.
    - (d) Count Itagaki.
- 

## (HISTORY OF ISLAM)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—PROF. MUHAMMAD HABIB, M.A.

*Attempt ANY THREE questions*

1. Give an account of the Prophet's struggle with the Quraish before the Flight, and explain the character and method of his preaching.
2. Comment upon *any three* of the following from Al Biladuri :—
  - (a) The prophet pressed the siege until the Banu-un-Nadîr agreed to evacuate the city, stipulating that they take with them whatever utensils their camels could carry.
  - (b) The Prophet granted the request of the people of Khyber and allowed them one-half of the fruits and grains.
  - (c) 'Najran and their followers are entitled to the protection of Allah and to the security of Mohammad, the Prophet, which security shall involve their persons, religion, land, and possessions, their camels, messengers, and images.'
  - (d) 'From Musasilmeth, the Prophet of Allah, to Mohammad, the Prophet of Allah. Greetings? To us half the land belongs and to Quraish the other half. But the Quraish do not act equitably.'
3. Describe the movement of apostasy among the Arabs after the death of the Prophet. How did the first Caliph succeed in suppressing it?
4. Estimate the services rendered to the cause of Islam by *any two* of the following: Sa'd b. Ali Waqas; Al-Muthanna; 'Amr b. al-'As; Abu Ubayda.
5. 'That the heritage of Islam is the world, was an after-thought. From first to last the summons was to the Arabs, and to them alone.' (*Muir*.) Examine and discuss.



## SECOND HALF

*Examiner*—PROF. M. Z. SIDDIQUI, M.A., PH.D.

*Attempt ANY THREE questions*

1. Describe the struggle for the Caliphate between Hazrat 'Ali and Mu'awiyah. What were, in your opinion, the chief causes of the latter's success?
2. Trace the main stages of Muslim expansion in Spain. Illustrate your answer with a map, if possible.
3. Carefully examine the character and policy of Omar II.
4. Give an account of the principal sources of revenue under the Omayyad Caliphs and the machinery for collecting it.
5. 'In spite of many good qualities which Hisham undoubtedly possessed, the Omayyad dynasty lost more and more in prestige during his reign.' (S. Khuda Bukhsh.) Illustrate and discuss.

## SEVENTH PAPER

## FIRST HALF

*Examiner*—MR. K. D. BANERJEE, M.A.

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

1. 'The Arab conquest was a mere episode in the history of India.' Expand the idea.
2. Give an account of Sultan Mahmud's expedition to Kanauj, and illustrate your answer with the aid of sketch map.
3. Offer an estimate of the domestic policy of Alauddin Khalji. Do you think that it was consistent with the Sacred Law? Give a reasoned answer.
4. Give an account of the Great Famine in the reign of Mohammed Tughluq, and explain the policy pursued by the Sultan for its relief and the restoration of agriculture.
5. Write short notes on the following :—  
The Slave Kings, Katehr, Rauthambhor, the Chauhans, and the Pathans.

## SECOND HALF

*Examiner*—DR. KALIKARANJAN KANUNGO, M.A., PH.D.

1. Portray the character of Humayun in the light of contemporary history, dwelling particularly on weaknesses which explain the failure of his reign.
2. Describe, in some detail, duties of the provincial and district officials in a Mughal *subah*. How did the Supreme Government control provincial administration during the reign of Akbar?
3. Give some account of the foreign trade of India in the seventeenth century.
4. Describe the various phases of the evolution of Akbar's religion of *Din-i-Ilahi*.  
*Did Din-i-Ilahi die altogether with Akbar?*
5. Draw pen-pictures of any two of the following characters :—  
Rajah Todar Mal, Dara Shukoh, Raja Sambhaji Maratha, Rathor Durgadas, Mirza Rajah Jai Singh.

## (COMPARATIVE POLITICS)

## SIXTH PAPER

## FIRST HALF

*The questions are of equal value**Answer ANY THREE questions from EACH half**Examiner—DR. U. N. GHOSHAL, M.A., PH.D.*

1. Consider how far imitation operates as a disturbing factor in the sphere of Comparative Politics.
2. In what sense is Solon's legislation a landmark in the history of the Ancient City? What lessons would you draw from his scheme of legislative reform?
3. Explain the origin of Greek tyrannies, and show how far the orthodox Greek view of this institution was justified by facts.
4. Describe carefully the Athenian methods of legislation. Do you think that the ecclesia in Athens was a true legislative assembly?
5. Discuss the limitations, if any, in theory and in practice, upon the Ancient Indian Kingship.

## SECOND HALF

*Examiner—MR. SANTOSHKUMAR CHATTERJI, M.A.*

6. Examine fully the attitude of the Greek intellectuals towards democracy. Consider, in this connexion, the Athenian methods of judicial administration.
7. Examine Maine's view of the development and mutual relations of *jus gentium* and *jus naturale*.
8. Compare the constitutions of the Achæan and Ætolian leagues. Do you think that these were more democratic than modern federal constitutions?
9. Characterize the Roman constitution as it stood at the end of the struggle between the patricians and the plebeians. Account for the failure of Rome to develop a democratic constitution.
10. Account for the origin of the mediæval feudal polity, and indicate its general tendencies and consequences. Do you notice any equivalent type of constitution in the history of mediæval India?

## SEVENTH PAPER

*The questions are of equal value**Candidates are permitted to answer SIX questions in all:**THREE from First Half and THREE from Second Half*

## FIRST HALF

*Examiner—MR. P. N. BANERJEE, M.A., B.L., BARRISTER-AT-LAW*

1. How is individual liberty secured in the constitutions of (a) U.S.A., (b) Germany, (c) Russia?

2. How far is it true to say that the House of Commons in England has failed as a deliberative assembly?

3. Institute a comparison between the judicial committee of the Privy Council and the House of Lords as supreme appellate tribunals within the British Empire.

4. Examine the relationship between the Quirinal and the Vatican in Italy, and show how it has affected Italian (i) national politics, (ii) local politics.

5. What place would you assign to the Princes in a future constitution for India? How do you propose to solve (a) the Muslim question, (b) the question of the Europeans in India?

## SECOND HALF

*Examiner*—MR. TRIPURARI CHAKRABARTI, M.A.

6. How far is the present constitution of Russia indebted to (a) the pure autocratic Tsarist régime, (b) Tsarist régime and the Dumas?

*Or,*

How would you estimate the indebtedness of the present German Constitution to the Vorparlament at Frankfurt?

7. Give a critical account of the working of the Referendum and the Initiative in the Swiss Constitution. Are these devices likely to work successfully in England?

8. How does the constitution of Canada diverge from a normal federal type?

9. How does the doctrine of separation of powers work in the constitutions of (i) U.S.A., (ii) Russia, (iii) England, (iv) Germany?

10. 'In France we have the organisation of an empire under the forms of a Republic' Discuss.

## (MODERN EUROPE)

### SIXTH PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—MR. SUSOBHAN CHANDRA SARKAR, M.A.

*Attempt ANY THREE questions*

1. How far was Castlereagh able to influence the history of the European Alliance?

2. Discuss the relations between England and Russia in the affairs of the Near East in your period.

3. How far was the liberalism of Alexander I sincere? What were the forces which changed his policy from time to time?

4. Why were the French Revolutions of 1830 and 1848 followed by risings in so many countries of Europe?

5. Give a critical estimate of the foreign policy of the Orleanist Monarchy.

## SECOND HALF

*Examiner*—DR. A. P. DASGUPTA, M.A., PH.D.*Answer ANY THREE of the questions*

1. What were the internal problems of France in the period of the Bourbon restoration? What attempts were made for their solution, and with what success?
  2. 'Carlsbad in German history signifies the suppression of liberty for a generation.' Elucidate the above, and estimate Metternich's influence over German affairs in this period.
  3. Trace the influence of liberal ideas on Spanish and portuguese history in your period.
  4. Estimate the part played by the Papacy and the Catholic church in the struggle for Italian unity and independence.
  5. How far is it true to say that the reign of Nicholas I marked the beginning of the breakdown of the old régime in Russia?
- 

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—PROF. A. BROWN, M.A., LL.B.*Only THREE questions may be attempted from this half*

1. Compare the services of Mazzini and Cavour to the cause of Italian unity.
2. Enumerate the fragments of the old Colonial Empire of France which still belonged to her in 1815, and trace the development of the new Colonial Empire of France during your period.
3. Write a short account of Poland's political struggles during the nineteenth century.
4. Discuss fully the foreign policy of Lord Palmerston.
5. Describe the distribution of peoples in old Austria-Hungary, and discuss the internal policy of the Austro-Hungarian Governments after 1867.

## SECOND HALF

*Examiner*—DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.*Only THREE questions are to be attempted*

1. Sketch the racial and constitutional struggles in Austria-Hungary up to the compromise of 1867.
2. Discuss the social and economic problems of Russia in the 19th century, and estimate the value of the reforms measures of Alexander II.
3. Write a short history of the Third republic in France, with special reference to the national problems of France after the disaster of 1870-71.

4. Estimate the services of Bismarck to the cause of German national union, and criticise his policy in the light of subsequent events in European history.

5. Criticise the Balkan settlement of 1878 in the light of subsequent developments.

6. Write critical notes on *any two* of the following :—

- (1) Clericalism in Germany.
  - (2) Austrian policy in the Near East from 1876-1904.
  - (3) French colonial expansion after 1870.
  - (4) Italian finance after the unification.
- 

### (ECONOMIC HISTORY)

#### SIXTH PAPER

*. The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. SUSOBHANCHANDRA SARKAR, M.A.

*Attempt ANY THREE questions*

1. Discuss the question of the origin of the manorial organisation in England and indicate the pre-Norman elements in the system.

2. Distinguish clearly between gild merchants and craft gilds. What were the forces which produced the gild system in England?

3. Sketch the history of the woollen industry in England before the Industrial Revolution.

4. What were the main features of the economic policy of the government of Elizabeth? Give reasons for the economic prosperity of England in this age.

5. Explain clearly what is meant by Mercantilism. How far did it serve the interests of England?

#### SECOND HALF

*Examiner*—DR. SUBODHCHANDRA MUKHERJEE, M.A., D.LITT.

*Answer ANY THREE questions*

1. Enumerate the principal inventions which led to the Industrial Revolution. Why is it called a 'Revolution'?

2. What were the Corn Laws? What circumstances led to the introduction of these laws and why were they abolished?

3. Write a short history of the Free Trade movement in England in the nineteenth century. Has the doctrine of Free Trade been justified by the experience of the twentieth century?

4. Enumerate the principal factory laws in England since the Industrial Revolution. What is the fundamental principle underlying factory legislation by the Government?

5. Write a historical note on the movement for the nationalisation of key industries and the possible economic effects of the policy.

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—DR. A. P. DASGUPTA, M.A., PH.D.*

*Answer ANY THREE questions*

1. How did the participation of the East India Company's servants in the internal trade of Bengal affect the economic condition of the province after the battle of Plassey?
2. What were the factors which challenged the position of cotton goods as an article of export from Bengal to England in the 18th century?
3. Review the state of the Indian cotton and jute industries during the period 1895-1914.
4. Describe the state of the finances of the Government of India from 1860 to 1894, showing the causes of deficits from time to time and the measures adopted to balance the budgets.
5. What were the circumstances that led to the exemption of agricultural income from income tax in India? Briefly discuss the nature of 'famine taxes' levied in this country during 1878-86.

## SECOND HALF

*Examiner—DR. J. P. NIYOGI, M.A., PH.D.*

*Answer ANY THREE questions*

1. What were the immediate objects of the Permanent Settlement of land revenue in Bengal, and how far were they achieved?
  2. Describe briefly the experiments made to frame an efficient system of land revenue in the Madras Presidency from 1798 to 1820.
  3. Discuss the financial policy of the Government of India with regard to the construction of railways in India in the second half of the 19th century.
  4. 'A modern Indian famine campaign is one of the most remarkable achievements in history of scientific administration.' Illustrate the above statement with reference to the history of famine relief in India.
  5. What has been the attitude of the State towards the development of the industries of this country?
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## (CONSTITUTIONAL HISTORY OF THE BRITISH DOMINIONS)

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—Y. J. TARAPOREWALA, M.A.**Answer THREE questions*

1. Discuss the Durham Report in the light of later Canadian history.
2. Has federalism failed in Australia ? To what other causes do you attribute the present troubles there ?
3. 'Separate membership in the League of Nations of the Dominions was sometimes interpreted as a sign that the British Empire was breaking up, but in reality this membership has proved to be a source of strength to the Empire.' Discuss.
4. 'There are peculiar difficulties in the continuance of the Privy Council as a Court of final appeal from the Dominions.' Discuss some of these difficulties and the various solutions proposed.
5. Account for the failure of the Imperial Federation Movement.

## SECOND HALF

*Examiner—MR. TRIPURARI CHAKRABARTI, M.A.**Answer THREE questions*

1. Describe briefly the main steps taken towards granting self-government to the Colonies between 1830 and 1856.
  2. 'The Colonial Governor par excellence.' Discuss this estimate of Lord Elgin.
  3. Sketch the growth of Close Union Movement in South Africa between 1905 and 1909.
  4. Write a short essay on the experiments in State Socialism in New Zealand.
  5. The British Parliament has been described as 'at once a legislative and a constituent assembly.' Does this description apply equally well to the Parliaments of the Dominions ?
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## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—MR. MRINALKANTI BASU, M.A.**Answer THREE questions*

1. Precisely indicate the limits of the control of the Government of India and the Secretary of State in the last resort, on the operation of the Transferred Subjects in the provinces under the Government of India Act of 1919.

2. Write a short note on the reserve powers of the Governor of a province and of the Governor-General in regard to (a) legislation including money bills, (b) administration, and (c) veto, provided in the Government of India Act of 1919.

3. Discuss some of the difficulties of the Indian problem in regard to (a) minority representation in the legislature, and (b) safeguarding of British commercial interests.

4. Should residuary power in Federal India rest in the Federal Government or the Federating States? Give reasons for your answer.

5. What are the fundamental rights of citizens secured under the British Constitution? How far are these rights guaranteed in law in (a) British India and (b) British Dominions?

## SECOND HALF

*Examiner*—DR. U. N. GHOSHAL, M.A., PH.D.

ANY THREE questions may be attempted

1. Analyse the salient features of Lord Mayo's system of Provincial Financial Settlements. What further changes were made in this system down to 1904, and why?

2. Examine the constitutional position of a minister in a Governor's province, with special reference to his relations with the Governor and the Legislative Council.

3. Sketch the development of representative institutions in British India down to the present times. In what sense may the present constitution be said to be a stepping-stone to responsible government?

4. Trace the history of the judicial system in British India from 1772 to 1857.

5. Discuss the political and constitutional relations of the Indian States with the Crown and the Government of India during the last thirty years.

## (ESSAY)

### EIGHTH PAPER

<i>Examiners</i> —	{	MR. TRIPURARI CHAKRABARTI, M.A.	LAW.
		DR. H. C. RAYCHOUDHURI M.A., PH.D.	
		MR. P. N. BANERJEE, M.A., B.L., BARRISTER-AT-	
		„ INDUBHUSHAN BANERJI, M.A.	
		DR. A. P. DASGUPTA, M.A., PH.D.	
		„ H. C. RAY, M.A., PH.D.	
		„ N. C. BANERJI, M.A., PH.D.	
	{	PROF. S. N. SEN, M.A., PH.D.	

*The figures in the margin indicate full marks*

Write an essay on any one of the following subjects :—

100

- (1) Relation of England with her colonies in the nineteenth century.
- (2) Character of Maurya Imperialism.



- (9) World's debt to Babylon and Egypt.
  - (4) Federalism in the modern world—its lessons for India.
  - (5) Rule of Law and Liberty of the subject in England.
  - (6) The Sovereignty of the British Dominions.
  - (7) The present economic and political crisis in the world and the question of disarmament.
  - (8) Ancient democracies and their lessons for modern times.
  - (9) Sikhism—its achievements and failures.
  - (10) The transition in Bengal in the latter half of the 18th century.
  - (11) 'The Rajputs during c. 650 to c. 1302 A.D. failed to produce a ruler like Chandragupta Maurya, who could merge the various conflicting interests under one flag by the prowess of his sword and oppose the invader with the resources of an empire.'
  - (12) 'The nationalist wars and popular upheavals of the 19th century brought Europe nothing but an armed peace, peace with the burdens of war, and without security.'
  - (13) Japanese militarism as a disturbing factor in world-politics.
  - (14) Mechanism of the Maratha State under the Peshwas.
  - (15) Economic progress of India during the last fifty years.
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## ECONOMICS

### FIRST PAPER (NEW REGULATIONS)

#### GENERAL PRINCIPLES OF ECONOMICS

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. P. C. GHOSH, M.A., B.Sc.

*Attempt only THREE questions*

1. Are the law of decreasing returns and the law of increasing returns capable of being symmetrically contrasted ?
2. What is meant by saving, and what is the relation between the process of saving by individuals and the creation of material capital ?
3. 'Profits are the result of the industrial process : they represent not cost, but surplus over cost.' (*Seligman*.)
4. To what extent is it true that the speculator relieves trade of the risk of fluctuating values, and in so doing distributes commodities most advantageously in time and space ?
5. 'It is sometimes held that modern biology, by demonstrating the dominant part played by heredity as compared with environment has proved economic enquiries which are, in the main, concerned with environment to be unimportant. Do you support this view ?

## SECOND HALF

*Examiner*—DR. R. M. CHAUDHURI, M.A., PH.D.

*Answer ANY THREE questions*

6. 'Current money is predominantly bank money.' Examine this statement. How is bank money created and what bearing has it upon the level of prices ?

7. 'A policy of stabilising prices necessitates either the substitution of something else for the gold standard or the stabilisation of the world value of gold.' Discuss.

8. What were the circumstances that led to the suspension of the gold standard by Great Britain in September, 1931 ? Consider the effects of this step upon Indian currency.

9. Discuss the different views held by economists regarding the influence of the bank rate upon price levels.

10. What are the conditions of monopolisation ? How can the State control private monopoly so that the national dividend will be as large as it would be under simple competition ?

## SECOND PAPER (NEW REGULATIONS)

## THIRD PAPER (OLD REGULATIONS)

## GENERAL PRINCIPLES OF POLITICAL SCIENCE

*Answer THREE questions in EACH half*

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. W. C. WORDSWORTH, M.A.

1. 'The ground of political obligation lies in the very nature of man.' (*Green.*) Discuss.

2. 'That the State should maintain unity in difference is a hard enough task—that it should itself constitute the unity of social life is a vain ideal.' (*McIver.*) Explain this statement.

3. 'Imperialism is a sort of half-way house.' (*Burns.*) Compare ancient and modern imperialism.

4. 'If liberty be then regarded as a social ideal, the problem of establishing liberty must be a problem of organising restraints.' (*Hobhouse.*) Discuss.

5. 'No unit is any longer self-sufficient ; over a vast area of functions, the decisions it takes involve world order in their incidence. Such decisions involve what has been termed cosmopolitan law-making.' (*Laski.*) Develop the implications in this.

## SECOND HALF

*Examiner*—MR. D. CHATTORAJ, M.A.

1. What part does the common man play and what part is he expected to play in the democratic government of to-day ?

2. Discuss the opinion that Democracy is of all forms of government the least capable of governing an empire.

3. Estimate the influence of the French Revolution, or of the doctrine of biological evolution, on political thought in England.

4. Is it possible to find a moral justification for the absolute power over the individual that the State sometimes claims in time of war?

5. 'In the Middle Ages it was the State's affair that a man should be a Christian. The State is now indifferent to the subject's spiritual welfare, but makes it its affair that the citizen shall be a soldier.' Comment.

### THIRD PAPER (NEW REGULATIONS)

#### PUBLIC ADMINISTRATION

*The questions are of equal value*

*Answer THREE questions in EACH half*

#### FIRST HALF

*Examiner*—MR. W. C. WORDSWORTH, M.A.

1. What is the place of the Privy Council in the British Constitution? Give a brief account of its origin and development.

2. Describe briefly the functions of the Treasury or the India Office.

3. How do you account for the frequency with which Governments succeed one another in France?

4. Give a brief account of the manner in which London is governed.

*Or,*

What is the place of the County in the local self-government system of England?

5. How is the President of the United States selected? Discuss his relations with Congress.

#### SECOND HALF

*Examiner*—MR. D. N. BANERJEE, M.A.

1. 'The Morley-Minto reforms were based on the fundamental principle that the executive government should retain the final decision of all questions, although some degree of popular control over legislation was established in the provinces by providing small non-official majorities.' Examine this statement.

2. Discuss the position and powers of the Ministers in a Governor's Province in India under the present constitution.

3. Is it feasible to bring the Indian States into any real federal union with British India? Indicate the lines on which an effective federation of the whole of India should be established.

4. How has the Statute of Westminster, 1931 affected the position of a Dominion in relation to the United Kingdom? Can a Dominion lawfully secede now from the British Empire under the Statute?

5. Briefly describe the constitution, powers, and duties of Union Boards in Bengal, and indicate in this connexion the lines on which the Bengal Village Self-Government Act, 1919, should be amended.

## FOURTH PAPER (NEW REGULATIONS)

## PUBLIC FINANCE

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.

*Answer ANY THREE questions*

1. 'The inheritance tax is only a means of securing equality in taxation and of realizing the principle of ability to pay.' Fully explain.
  2. Contrast the effect on the volume of national savings of raising a given amount of revenue from (a) income tax, and (b) death duties.
  3. 'There is no real analogy between the debt of the individual and the debt of the State. An individual's motives for clearing himself of debt may apply to the external obligations of the State; but they can have no application to its internal obligations.' Critically examine the statement.
  4. State the provisions and examine the importance of the Exchequer and Audit Act of 1866 in British public finance.
  5. Discuss the principles which should regulate the imposition of excise duties.
- 'In general, excises as taxes on expenditure or consumption are unfair.' Do you agree with this view? State reasons for your answer.

## SECOND HALF

*Examiner*—PROF. P. N. BANERJEA, M.A., D.SC., BARRISTER-AT-LAW

*Answer AND THREE questions*

1. What are the main taxes from which the municipalities and local bodies in India derive their revenues? Do you consider these taxes satisfactory from the economic standpoint? State reasons for your answer.
  2. Point out the main defects of the existing system of provincial finance in India, and suggest remedies.
  3. Give a brief outline of the history of customs duties in India from 1914 to the present day.
  4. 'Fees tend to develop into taxes.' Discuss this statement, and illustrate your answer from various kinds of fees levied in India.
  5. Discuss the nature and extent of the financial powers of the legislatures in India.
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FIFTH PAPER (NEW REGULATIONS)  
INDIAN ECONOMICS (LAND TENURES)

*The questions are of equal value*

FIRST HALF

*Examiner*—PROF. S. C. RAY, M.A.

*Not more than THREE questions to be attempted*

1. Summarise the main points of the controversy leading to the Decennial Settlement of land revenue in Bengal and its subsequent enactment as the Permanent Settlement.

Discuss briefly its social, economic, and financial implications.

2. Describe the respective positions and rights of the landlords and tenants and their mutual relations between 1793 and 1857.

3. Account for the emergence of a large number of intermediate rent-receivers in Bengal. What are its effects on the position of the subordinate tenantry in the province?

4. Discuss the provisions of the Bengal Tenancy Act, 1928.

5. 'The State is in partnership with both landholders and cultivators; its object must be to work for the prosperity of the cultivator, thereby ensuring the stability of the landholder's income and consequently its own revenue.' Explain.

Give a brief account of the measures which have been adopted by the Government in India to fulfil its obligations to the cultivators.

SECOND HALF

*Examiner*—DR. R. M. CHAUDHURI, M.A., PH.D.

*Answer ANY THREE questions*

1. Suggest a scheme for the industrial development of Bengal bearing in mind its natural resources, raw materials, labour supply, and financial facilities.

2. Give a brief account of the power resources of India. What are the potentialities for the development of hydro-electric power in India?

3. Indicate in brief the present position of the cotton mill industry in India. Do you consider it desirable to grant fiscal protection to this industry?

4. Give an account of the various measures that have been passed since 1923 to ameliorate the conditions of Indian labour. In what respects do these measures require modification?

5. Indicate (a) the advantages that exist for, and (b) the difficulties to be overcome in, establishing any two of these industries in India (i) chemical, (ii) ship-building, (iii) motor car construction.

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## FIRST PAPER (OLD REGULATIONS)

## GENERAL ECONOMICS

*The questions are of equal value*

*Attempt ANY THREE questions from each half*

## FIRST HALF

*Examiner*—MR. P. C. GHOSH, M.A., B.Sc.

1. Is there loss of national wealth if an invention appears which suddenly renders obsolete great masses of expensive machinery?
2. Discuss whether it would be desirable that the population of India should increase rapidly or slowly in the next decade.
3. Is it possible for a country to devote too much of its resources to saving?
4. 'Progress in industrial efficiency and increasing unemployment are inevitable concomitants under Capitalism.' Examine this statement critically.
5. Examine the validity of the marginal method in the study of economics.

## SECOND HALF

*Examiner*—MR. D. N. GHOSH, M.A.

6. What ground, if any, is there for holding that rent is, while wages are not, a surplus above costs?
  7. Is it to the social interest that a monopolist should be permitted to sell his product at different prices to different groups of customers?
  8. What is meant by a 'Representative Firm'? Is the conception necessary to explain the normal supply price of a manufactured product?
  9. For what services are (a) interest, (b) profits, supposed to be paid?
  10. How far is it true to say that the exposition of the theory of value by J. S. Mill was not final?
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## SECOND PAPER (OLD REGULATIONS)

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.

*Attempt ANY THREE questions*

1. Discuss the influence of the development of (a) standardisation and (b) means of communication, upon the size of the representative business unit.
2. 'Without a Stock Exchange it would be difficult to see how modern forms of property ownership could possibly function.' Discuss the services of the Stock Exchange in the light of this statement.
3. Examine the true nature and advantages of the elasticity of a nation's currency; and show how far such elasticity has been secured in (a) the U.S.A. and (b) India.

4. Analyse the circumstances which led to the breakdown of the gold standard in the United Kingdom recently. How did this phenomenon affect India?

5. Discuss the services rendered by constructive speculation to modern trade and industry.

## SECOND HALF

*Examiner*—MR. D. N. GHOSH, M.A.

*Attempt ANY THREE questions*

6. Discuss the various instrumentalities of credit control at the disposal of Central Banks and their efficacy.

7. 'Since Government spends every rupee taken in taxation, the volume of such transfers is a matter of indifference.' Examine the validity of this statement.

8. Discuss the nature and merits of the Purchasing Power Parity Theory. How far is it to be regarded as a trustworthy guide to the movements of Foreign Exchange?

9. On what lines would you estimate the gain accruing to a country from its foreign trade?

10. 'The operation of the law of diminishing return tends to limit the area of international exchange, while that of the law of increasing return is calculated to extend it.' Explain this statement fully.

## FOURTH PAPER (OLD REGULATIONS)

### PUBLIC ADMINISTRATION

*The questions are of equal value*

*Answer THREE questions in EACH half*

### FIRST HALF

*Examiner*—PROF. P. N. BANERJEA, M.A., D.Sc., BARRISTER-AT-LAW

1. 'The Reforms of 1909 afforded no answer, and could afford no answer, to Indian political problems.' Discuss this statement, and show in what respects the Reforms of 1919 have been an improvement upon those of 1909.

2. Discuss the constitutional position of the Governor-General of India in relation to (i) his Executive Council, (ii) the Indian Legislature, and (iii) the Secretary of State for India.

3. What is meant by the problem of minorities in India. What will, in your opinion, be the best solution of the problem? Give reasons for your answer.

4. Discuss the powers vested in the Executive in regard to legislation in India. Would you retain any of them in the Scheme of Reforms now under consideration?

5. Devise, in the light of the experience of the last ten years, an equitable scheme of central and provincial finance to suit the requirements of an All-India Federation.

## SECOND HALF

*Examiner*—MR. D. N. BANERJEE, M.A.

1. 'The British North-America Act (1867) is noteworthy as being a federal constitution, to a great extent drafted by men who were in favour of a legislative union.' Examine this proposition.
2. Discuss developments in the organization of the British Empire since the last War.
3. Describe briefly the leading developments in party politics in Britain in the last ten years.
4. 'How do the Central and Provincial Legislatures in India direct and control expenditure? Discuss the extent to which this direction and control are effective.'
5. 'In the present circumstances of India the greater part of the revenue must be raised by indirect taxes and fiscal theory must be subordinated to the necessities of the case.' Discuss.

## (GROUP A)

## (HISTORY OF ECONOMICS)

SIXTH PAPER (NEW REGULATIONS)FIFTH PAPER (OLD REGULATIONS)*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. BIJAY K. SARKAR, M.A.*Answer ANY THREE questions*

1. Trace the influence of Greek and Roman thought on the evolution of economic doctrines.
2. Explain the 'sterility doctrine' of the Physiocrats. How far was Adam Smith influenced by this doctrine? What is the modern economic opinion on this question?
3. Give a critical account of the aims and methods of French Syndicalism. Why is it that this movement has few adherents in England?
4. Give a critical estimate of the Malthusian doctrine of Population.
5. What is the place of Ricardo in the development of economic thought?
6. Discuss the outstanding contributions of Marshall to economic theory.

## SECOND HALF

*Examiner*—MR. J. KELLAS, M.A.*Answer ANY THREE questions*

1. Are we justified in using the term 'revolution' in reference to the economic changes which took place at the end of the eighteenth, and the beginning of the nineteenth, centuries?



2. Discuss broadly the influence, of economic theory upon economic statesmanship in Britain in the nineteenth century, with special reference the doctrine of 'laissez faire'.

3. In what ways did the British connection with India affect the development of British industry and trade in the eighteenth and nineteenth centuries?

4. Give a brief outline of the history of trade unionism in Britain.

5. Indicate the economic consequences on Britain of the opening up of the Empire by trade and communications in the second half of the nineteenth century.

### (INTERNATIONAL TRADE—FIRST PAPER)

#### SEVENTH PAPER (NEW REGULATIONS)

#### SIXTH PAPER (OLD REGULATIONS)

*The questions are of equal value*

#### FIRST HALF

*Examiner*—DR. NALINAKSHA SANYAL, M.A., PH.D.

*Answer any THREE questions*

1. 'International trade is based on differences in comparative costs.' Explain this statement with the underlying assumptions.

Examine in this connection how far this theory of international trade is affected by the existence of non-competing groups in the trading countries

2. Examine the general conditions governing the incidence of import duties. Do you agree with the view that the problem of the incidence of such duties can be completely solved by the study of price movements alone?

3. It is often maintained that the lower prices charged by a dumper to foreigners are in no way disadvantageous to domestic consumers. What is your view as regards this contention?

4. 'The neglect to allow for changes in the terms of trade is the most unsatisfactory feature of Prof. Cassel's Purchasing Power Parity Theory.' Fully discuss this statement.

5. Discuss the main influences acting upon the post-war gold movements, and explain the causes of the abnormal flow of gold to the United States and France.

#### SECOND HALF

*Examiner*—DR. J. C. SINHA, M.A., PH.D.

*Answer ANY THREE questions*

6. Indicate the main difficulties encountered in properly interpreting the statistics of exports and imports.

7. How far is the depreciation of a country's currency to be regarded as an advantage in foreign trade?

8. Discuss the influence of international loans upon (a) the foreign exchange, (b) the price-levels, and (c) the balances of trade of the borrowing and the lending countries.

9. Examine the effects of the opening up of the foreign trade of a country upon the distribution of wealth in that country.

10. Indicate the character, and appraise the value, of the contributions of (a) Cairnes and (b) Sidgwick, to the theory of international trade.

## SECOND PAPER

### EIGHTH PAPER (NEW REGULATIONS)

### SEVENTH PAPER (OLD REGULATIONS)

*The questions are of equal value*

#### FIRST HALF

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.

*Answer ANY THREE questions*

1. Examine the view that 'retaliation always recoils on the heads of those who attempt to practise it.' How far is a policy of retaliation consistent with free trade?

2. Discuss the following statements :—

(a) Protection increases the national dividend by attracting foreign capital.

(b) Protection increases the national dividend by making the barter terms of trade more favourable.

3. Examine the suitability of protection as a means of :—

(a) correcting an adverse balance of indebtedness,

(b) reducing unemployment.

4. Compare the merits of ad valorem and specific duties as instruments of (a) revenue, and (b) protection.

5. Sketch the history of the formation of the Zollverein. What advantages did Germany derive from this Customs Union?

#### SECOND HALF

*Examiner*—MR. K. B. SAHA, M.A.

*Answer ANY THREE questions*

1. Give a brief account of the post-war tariff legislation in the U.S.A.

'America must abandon her traditional tariff policy in view of the fact that she is now a creditor country.' Critically examine the statement.

2. 'If the Most Favoured Nation Clause is unlimited and unconditional, it assures the best treatment which two countries can possibly grant one another in customs matters.' Elucidate this statement.

3. Examine the effect of American tariff on the development of the silk and rayon industries.

4. Comment on the following statements :—

(a) A protective import duty facilitates dumping by the duty-levying country.

(b) A protective import duty is a safeguard against the dumping of goods into the duty-levying country.

5. Mention some of the difficulties of using statistical evidence with a view to study the effect of tariff policy on national prosperity. Illustrate your answer from tariff history.

### (BANKING AND CURRENCY—FIRST PAPER)

#### SEVENTH PAPER (NEW REGULATIONS)

#### SIXTH PAPER (OLD REGULATIONS)

*Examiner*—DR. B. R. RAU, M.A., PH.D.

#### FIRST HALF

*The questions are of equal value*

*Answer ANY THREE from EACH half*

1. What explanation can you render for the 'antediluvian' nature of the French monetary system? Account for the recent piling up of gold in the French banking system.

2. Point out the excellences of the Canadian banking system. Mention some of its salient features which can be safely incorporated in our banking system.

3. 'Abolish all laws regulating the gold reserves of the Central Banks.' (*Cassel*).

Explain this statement and indicate the salient characteristics of managed paper-currencies.

4. Comment on the difficulties attendant on the management of the Land Mortgage Banks in India.

5. Write explanatory notes on *any four* of the following :—

- (a) Rationing of credit.
- (b) The proportional reserve system.
- (c) Open market operations.
- (d) Investment trust.
- (e) Contango.
- (f) Licensing of money-lenders.

#### SECOND HALF

*Examiner*—MR. A. C. SENGUPTA, M.A.

1. 'The sliding scale of discount.....is made use of by all Central Banks and.....is of pre-eminent importance.' (*Dunbar*.)

Explain fully.

How can a Central Bank make market rates follow the bank rate?

2. What do you understand by an Exchange Bank in India? 'Clearly explain the kinds of business such a Bank undertakes.'

'They (Exchange Banks) have unfortunately reproduced the same unscientific method of quoting exchange rates as in the case of the London Money Market.' (Rau.)

Explain and give some examples.

3. What led to the amalgamation of the Presidency Banks, and what have been its effects ?

In what respects does the Imperial Bank of India fail to satisfy the requirements of a good Central Bank ?

4. What were the principles underlying the Bank Charter Act of 1844 in England ? Examine these principles, and explain what changes have recently been made in this respect.

5. 'The Hundi rate rises and falls with the Bank rate proper, though somewhat in advance of it.'

Explain.

### (BANKING AND CURRENCY—SECOND PAPER)

#### EIGHTH PAPER (NEW REGULATIONS)

#### SEVENTH PAPER (OLD REGULATIONS)

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. BHUJANGABHUSHAN MUKHERJEE, M.A.

*Answer ANY THREE questions*

1. Explain clearly the Purchasing Power Parity Theory, and indicate how far, in your opinion, it is an improvement on the earlier theories of foreign exchange.

2. State and discuss the important changes that have taken place in the post-war currency system of England.

3. Write explanatory notes on *any five* of the following :—

Inflation ; Deflation ; Gold Bullion Standard ; Currency principle ; Federal Reserve System ; Sterling-dollar cross-rate ; Bank-rate ; Market-rate ; Reverse councils ; Mint par of exchange.

4. Indicate the salient features of the British currency system since the suspension of the gold standard in September, 1931. Explain clearly its consequences on the rupee-sterling exchange.

5. Explain clearly the Quantity Theory of Money. Indicate how far it succeeds in giving us a correct and scientific explanation of the rise and fall in prices.

#### SECOND HALF

*Examiner*—MR. A. K. SARKAR, M.A.

*Answer ANY THREE questions*

1. What is the present position of England regarding the sufficiency of its metallic reserve as the basis of its currency ?

How would India be affected by a fifty per cent. fall in the value of sterling ?

2. What were the grounds on which the Secretary of State for India was averse to the adoption of the gold standard in India during the latter half of the nineteenth century ?

Do you justify, in this connection, the strong language used by Mr. Macleod ?—

'Those, therefore, responsible for the continuance of the cruel wrong inflicted on the Indian people in the matter of their currency, are not the viceroys but the authorities at home.'

3. Write a short history of the Gold Standard Reserve.

Discuss the view of the Hilton Young Commission regarding the amalgamation of the Gold Standard and the Paper Currency Reserves.

4. Discuss the recent controversy about the exchange value of the rupee. What, do you think, have been the effects of the 1s. 6d. rate on (1) the Indian cotton industry, and (2) the Indian agriculturists ?

5. Discuss the proposals of the Hilton Young Commission regarding the reform of the Indian Paper Currency System.

Do you agree with the view that 'the termination of the anomalous provision by which one form of note, the paper note, is convertible by law into another form, the silver note, is an essential step in Indian currency reform which must be taken sooner or later' ?

### STATISTICS—FIRST PAPER

#### SEVENTH PAPER (NEW REGULATIONS)

#### SIXTH PAPER (OLD REGULATIONS)

*The questions are of equal value*

### FIRST HALF

Examiner—DR. H. SINHA, M.Sc., Ph.D.

*Answer ANY THREE questions*

1. Define the terms *median* and *quartiles*, and discuss the uses, advantages, and disadvantages of the median as an average and of the semi-interquartile range as a measure of dispersion.

Find the medians and quartiles of the two series of index numbers for prices of 20 foodstuffs, and use the work to illustrate your comments :—

Foodstuff No.	Index for 1913.	Index for 1929.	Foodstuff No.	Index for 1913.	Index for 1929.
1	58	77	11	99	142
2	65	91	12	102	151
3	66	84	13	105	175
4	70	91	14	104	157
5	73	95	15	95	144
6	73	112	16	40	42
7	67	95	17	38	31
8	82	143	18	88	140
9	92	120	19	44	54
10	98	132	20	52	98

2. Define, and deduce the principal properties of, the correlation coefficient. Find the correlation between the following values of  $X$  and  $Y$  and the two regressions, all correct to two places of decimal :—

$X$	$Y$
6	4
5	4
7	10
9	9
10	11

3. The following table gives the number of children under five years per thousand women at unequal intervals of time :—

Year	...	1800	1805	1815	1830	1860
Number of children	..	1,952	1,952	1,905	1,753	1,428

Find the probable number of children per thousand women for the year 1810.

4. Shew that if random samples of  $n$  observations are drawn from an indefinitely large record in which the proportion of  $A$ 's is  $p$ , and of not- $A$ 's is  $q$ , the standard deviation of the number of  $A$ 's in the sample is  $\sqrt{npq}$ .

You are given the following data :—

Father, skilled worker :—36 boys, 24 classed as intelligent.

Father, unskilled :—64 boys, 32 classed as intelligent.

5. What in your opinion, is the best method of measuring the purchasing power of money? Discuss the reasons why the wholesale standard is ineligible for the purpose, but show how the latter may provide a basis for determining the former.

## SECOND HALF

*Examiner*—MR. G. FINDLAY SHIRRAS, M.A., F.S.S., I.E.S.

*Answer THREE questions*

1. What are the chief characteristics of a frequency distribution?

Deduce the equations of two symmetrical frequency distributions, one having limited and the other unlimited range.

2. A random population consists of  $M$  individuals of whom  $M_1$  are Hindus. A random sample of  $N$  individuals contains  $N_1$  Hindus.

Show that the coefficient of variation of  $N_1$  from sample to sample is

$$100 \sqrt{[(M - M_1)/M_1N]}.$$

3. What do you regard as Karl Pearson's main contributions to the science of statistics?

What do you know of the Chi-square test of goodness of fit which he evolved in the theory of the normal curve of error, and what do you think of his formula for skewness?

4. If you were asked to compare India with the United States in regard to the severity of the trade depression what statistics would you collect? What are some of the difficulties in the generalization of statistical results?

5. Write a short account of the strength and weakness of Indian official statistics. What, in your view, is the best means of improving these statistics?

## (STATISTICS—SECOND PAPER)

EIGHTH PAPER (NEW REGULATIONS)SEVENTH PAPER (OLD REGULATIONS)*The questions are of equal value**Only THREE questions are to be attempted from EACH half*

## FIRST HALF

*Examiner*—MR. G. FINDLAY SHERRAS, M.A., F.S.S., I.E.S.

1. Explain what is meant by standardisation of death-rates, giving the different methods in use and discussing their respective advantages.
2. Describe the principal difficulties of handling statistics of occupational mortality, and describe the method of obtaining 'comparative mortality figures'.
3. Discuss briefly the use of the 'logistic' curve as an expression of the law of the growth of population.
4. Examine Pareto's Law relating to the distribution of national income.
5. If you wanted to estimate the standard of living of a group of town labourers, what statistics would you require to collect, and how would you proceed to do it?

## SECOND HALF

*Examiner*—MR. P. C. GHOSH, M.A., B.Sc.

6. Describe the statistical materials available regarding trade between India and the U.S.A. Where would you look and what would be the nature of the information found in the various official reports on the subject?
7. Write a short note on the difficulties in the compilation of statistics regarding the yield of rice, jute, and cotton, in India. Do you find the method of 'anna estimate' helpful and reliable?
8. Can you explain as to why the Government of India adopted the system of unweighted Index Numbers of prices? Describe the principal sources of price statistics in India.
9. What statistics would you require for estimating the average income of India? Do you find the existing data adequate and reliable? Give reasons for your answer.
10. Discuss critically the classification of occupations which was adopted in the last census of India.

## (MATHEMATICAL ECONOMICS—FIRST PAPER)

SEVENTH PAPER (NEW REGULATIONS)SIXTH PAPER (OLD REGULATIONS)*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. P. C. GHOSH, M.A., B.Sc.

1. Discuss some of the main criticisms that have been made against the law of diminishing utility.

2. Consider that the various sources of supply in a market are not independent of each other. Does this affect our general notion of increasing returns in any way?

3. How do you measure elasticity of demand? What is the general equation to demand curves representing at every point an elasticity equal to ' $n$ '?

4. Show that (a) the position of equilibrium in the process of bartering is indeterminate; (b) 'the essential condition of this indeterminateness is the absence of competition'.

5. Edgeworth makes a distinction between the pure and impure part of a contract curve. Can you bring out the economic significance of the impure part?

## SECOND HALF

*Examiner*—MR. H. C. GHOSH, M.A.

1. Analyse the main factors that affect the utility of a commodity. How do they influence the shapes of individual and market demand curves?

2. Explain how money is adopted as a measure of utility.

3. Give a short note on the methods of estimating national dividend.

4. 'Cost of production determines supply;  
Supply determines final degree of utility;  
Final degree of utility determines value.' (*Jevons*.)

Is this a correct theory of value? Give your reasons.

5. 'The problems presented by interchange between close markets are incapable of being solved without the aid of graphic or analytical methods'. (*Pantaleoni*.)

Comment upon it.

## (MATHEMATICAL ECONOMICS—SECOND PAPER)

### EIGHTH PAPER (NEW REGULATIONS)

### SEVENTH PAPER (OLD REGULATIONS)

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. H. C. GHOSH, M.A.

1. Examine the hindrances to the realisation of maximum net product due to the relative variability of industry.

2. Discuss, after Pigou, how far uncertainty-bearing is a distinct factor of production.

3. Examine carefully the possible cases of opposition between social net product and private net product.

4. Examine and criticise, after Pigou, Pareto's Law regarding the distribution of the national dividend.

5. 'For the equilibrium of a many-firm industry it is true that equilibrium is only attainable if both its average cost and marginal cost are equal to the supply price of the industry. But for the equilibrium of one-firm industry this is not true.' (*Pigou*.)

Can you support this view?



## SECOND HALF

*Examiner*—MR. P. C. GHOSH, M.A., B.Sc.

1. Discuss the effect of the following kinds of taxes upon the monopoly price and output: (a) a lump sum tax, (b) a tax proportional to output, and (c) a tax proportional to selling price.
  2. Carefully explain what you mean by competition. Show, after Cournot, the effect of unlimited competition upon the price of a commodity.
  3. Discuss the effect of improvements upon the rentability of a piece of agricultural land.
  4. Examine the immediate effect of (a) taxes upon imports, and (b) impediments (other than taxes) on exports.
  5. 'The same principle that determines the flow of any given commodity to the various consumers also determines the flow of the factors of production to the different industries.' (*Wicksteed*.)  
Elucidate this statement.
- 

(MODERN ECONOMIC DEVELOPMENT—FIRST PAPER)

## SEVENTH PAPER (NEW REGULATIONS)

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. N. SANYAL, M.A., PH.D.

*Answer any THREE questions*

1. Discuss the social and economic effects of the Industrial Revolution in England.
2. Explain the circumstances that led the growth of Social Insurance legislation in Germany.
3. Discuss the influence of nationalism upon present-day tariff policy.
4. Describe the methods adopted by the State and other Agencies for the promotion of agriculture in France.
5. Account for the present tendency in England towards a protective tariff.

## SECOND HALF

*Examiner*—MR. BIJOY K. SARKAR, A.B.

*Answer ANY THREE of the following*

1. Describe the nature of inland transport arrangements in England during the first quarter of the nineteenth century, and state the circumstances in which railways were called for.
2. Give a short account of the origin and development of the Co-operative Credit movement in Germany.

3. Trace the growth of the movement for industrial combinations in *any one* of the following countries : (a) England, (b) Germany, (c) United States of America.

4. Describe the attempts that are being made for the reconstruction of industries in Russia.

5. Describe the changes in the nature and the direction of India's foreign trade since the last war.

(MODERN ECONOMIC DEVELOPMENT—SECOND PAPER)

EIGHTH PAPER (NEW REGULATIONS)

*The questions are of equal value*

FIRST HALF

*Examiner*—DR. P. C. BASU, M.A., PH.D.

*Answer ANY THREE questions*

1. Trace the growth of socialistic ideas in England, Germany, and Russia in recent years, especially indicating, in each case the lines of divergence from the orthodox Marxian ideas.

2. Critically examine whether the system of industrial parliament as introduced in Germany has operated as a buffer between Russian communism and West European capitalism.

3. Briefly describe the German methods of financing industries. How far, and with what advantage, can India adopt these methods?

4. Indicate the circumstances that have led to the amalgamation movement among British banks. What have been its effects upon the country's trade and industries?

5. Give a brief history of labour legislation in India.

SECOND HALF

*Examiner*—DR. J. C. SINHA, M.A., PH.D.

*Answer ANY THREE questions*

1. Outline the history of the cotton industry of Japan, and describe the nature and extent of the Japanese competition with the Indian cotton industry.

2. Trace the progress of joint stock banking in Japan since 1882 and estimate its influence on the industrial development of the country.

3. Was there any decline of Indian manufactures during the first half of the nineteenth century? Discuss this, pointing out any changes that may have occurred in Indian industries during that period.

4. Give an account of the changes which have taken place in the tariff policy of the Government of India since 1874, and examine briefly their effect on Indian industries.

5. India has adopted the policy of complete nationalization of her railways whereas England rejected this policy after the War.

Examine the reasons for these opposite policies.

## GROUP B

## (HISTORY OF POLITICAL THOUGHT)

## SIXTH PAPER (NEW REGULATIONS)

## FIFTH PAPER (OLD REGULATIONS)

## FIRST HALF

*Examiner*—PROF. S. C. RAY, M.A.*Answer ANY THREE questions*

1. 'The subject of Plato's Republic is not Politics alone. It is the sum of human life in its political, ethical, cultural, religious, and philosophical aspects.' Develop this proposition.

2. 'Plato was the earliest *Eugenist*, *Feminist*, and *Communist*.' Expand this.

Expound and comment on his *Communism*.

3. Wisdom, courage, temperance, and justice are, according to Plato, the four qualities which constitute the goodness of the State.

Wherein, according to him, does each of these qualities consist and how is justice ultimately found to be the basis of the State?

4. Indicate the leading ideas in Aristotle's Politics which have influenced modern political thought.

5. Summarise the main ideas underlying the political doctrines of :—

(1) the Epicureans.

(2) the Stoics.

## SECOND HALF

*Examiner*—MR. N. C. BHATTACHARYYA, M.A.*Answer ANY THREE questions*

1. Comment on any two of the following :—

(a) 'Nor must a State be considered great because it possesses military prowess.' (*Aristotle*.)

(b) 'With us there is great justice, because that war is just which is necessary, and arms are hallowed when there is no other hope but in them.' (*Machiavelli*.)

(c) 'The only way to erect such a common power . . . is to confer all their power and strength upon one man, or upon one assembly of men, that may reduce all their wills by plurality of voices into one will; which is as much as to say, to appoint one man or assembly of men to bear their person; . . . ' (*Hobbes*.)

(d) 'Thus the grass my horse has bit, the turfs my servant has cut, and the ore I have digged in any place, where I have a right to them in common with others, become my property without the assignation or consent of anybody.' (*Locke*.)

(e) 'There is often a great deal of difference between the will of all and the general will; . . . ' (*Rousseau*.)

2. Briefly indicate the Christian attitude towards the State from the rise of Christianity down to the Hildebrandine epoch.

*Or,*

Write a short note on the growth of democratic ideas during the middle ages.

3. 'Had there been no Luther there could never have been a Louis XIV.' (Figgis.) Do you agree?

4. 'Strike out the "Discourse on the Origin of Inequality" with the first few pages of "The Social Contract," and the individualism of Rousseau will be seen to be nothing better than a myth.' Discuss this proposition fully.

5. 'Political science is the fruit of history and history is the root of political science.' Substantiate this statement with reference to the political ideas of Burke.

### (COMPARATIVE POLITICS—FIRST PAPER)

#### SEVENTH PAPER (NEW REGULATIONS)

#### SIXTH PAPER (OLD REGULATIONS)

#### FIRST HALF

*Examiner*—MR. P. N. BANERJEE, M.A., B.L., BARRISTER-AT-LAW

*The questions are of equal value*

*Candidates are permitted to answer SIX questions in all : THREE from the First Half and THREE from the Second Half*

1. How far is it true to say that the party-system in the U.S.A. has failed?
2. 'The Colonial Laws Validity Act, 1865, has been described as the Magna Charta for the colonies.' Do you agree? How far has the recent statute of Westminster affected it?
3. 'The parliamentary system of government has been a failure in France.' (Bodley) Do you agree? Give reasons for your answer.
4. How far does the constitution of Canada diverge from the normal federal type?
5. What is your estimate of the working of the Referendum and the Initiative in the Swiss Constitution?

#### SECOND HALF

*Examiner*—MR. N. C. CHATTERJI, M.A., B.L., BARRISTER-AT-LAW

*Only THREE questions to be attempted from this half*

6. How has the liberty of the subject been secured in the constitutions of (1) Germany, (2) Russia, and (3) U.S.A.?
7. 'The Soviet form of government is not only a negation of the Parliamentary type of Government but is a negation of democracy as well.' Discuss.
8. 'The Anglo-Saxon federations stand in striking contrast to European continental federations such as the German and the Swiss.' Expand.

9. 'Preogative once parted with can never be recalled.' (*Campbell v. Hall*.) Explain. Has the Crown got supplemental powers of legislation in (i) India, (ii) Ceylon, (iii) Canada, (iv) Australia? If so, to what extent?

10. How does the House of Representatives in the U.S.A. compare with the House of Commons in England?

### (COMPARATIVE POLITICS—SECOND PAPER)

#### EIGHTH PAPER (NEW REGULATIONS)

#### SEVENTH PAPER (OLD REGULATIONS)

#### FIRST HALF

*Examiner*—DR. U. N. GHOSHAL, M.A., PH.D.

*The questions are of equal value*

*Answer ANY THREE questions*

1. What are the main conditions of success of Party government? Do you see any signs of its breakdown in European countries?

2. In a bicameral legislature, on what principle are the constitution and the relative powers of the two chambers determined? Illustrate from Great Britain, Germany, and Switzerland.

3. Compare the organisation of public opinion as a political institution in Great Britain, America, and Italy, bringing out the merits and defects of each system.

4. What is the relation between the legislature and the executive in (a) Germany, and (b) Russia, and how does it vary from that in Great Britain?

5. What are the essential features of a democratic government? Examine some reactions against it in modern Europe.

6. Why is the possibility of a deadlock between the legislature and the executive greater in America than in Great Britain? Critically examine the constitutional laws and conventions in the two countries bearing on this question.

#### SECOND HALF

*Examiner*—DR. P. C. BASU, M.A., PH.D.

1. Indicate the salient features of Maine's Patriarchal Theory, and show what modifications it has undergone in the light of subsequent research.

2. 'The Roman kingship is the earliest form of State administration completely and judiciously developed.' Amplify. Account in this connexion, for the difference between the historical development of Greek and Roman kingship.

3. Compare the Athenian methods of legislation with those of Ancient Rome and of modern times.

4. Describe the constitutions of the Achaean and the Aetolian Leagues, and compare them with the constitutions of the Ancient City-States.

5. Distinguish the points of resemblance and of difference between the cities of Ancient Greece and Mediæval Italy.

## (SOCIOLOGY—FIRST PAPER)

SEVENTH PAPER (NEW REGULATION)SIXTH PAPER (OLD REGULATIONS)

## FIRST HALF

*Examiner*—MR. BENAY KRISHNA SARKAR, M.A.*The questions are of equal value**Answer ANY THREE**Answers to be short and precise*

1. (a) Analyse the occupational structure of the people of India with a view to the examination of her poverty problem.  
(b) How far is the trend in the birth-rate of Bengal exceptional?
2. (a) What light do animals throw on social behaviour?  
(b) Write notes on any four of the following: (1) positive criminology, (2) school hygiene, (3) infant mortality, (4) Indian emigrants, (5) criminal tribes.
3. (a) Describe the main branches of social insurance in their bearings on the condition of working men in India.  
(b) Discuss the position of women as wage-earners.
4. (a) Write short estimates of:—  
Durkheim, Parmelee, Bhudev Mukerji.  
(b) What are your objections to the use of eugenics in schemes of marriage reform?
5. (a) To what extent is the mind of primitive man antisocial?  
(b) Describe some of the classifications of crimes as embodied in penal codes.

## SECOND PAPER

*Examiner*—MR. S. C. CHAKRABARTY, M.A.*Answer ANY THREE questions*

1. 'Primitive institutions are invariably bound up with democratic government.' Do you accept this view? Give reasons for your answer.
  2. To what extent does communal ownership of property obtain in primitive society? Discuss this question fully, adducing evidence in support of your statements.
  3. What is meant by 'preferential mating'? Discuss the various theories relating to the origin of the institution of cross-cousin marriage among primitive peoples.
  4. Write a note on the characteristic features of the sib-system in primitive society. 'The sib appears as an extra-ordinarily changeable social unit.' Discuss.
  5. Write notes on any two of the following:—  
(1) Wergild.  
(2) Shamanism.  
(3) Avunculate.  
(4) Couvade.
-

## (SOCIOLOGY—SECOND PAPER)

EIGHTH PAPER (NEW REGULATIONS)SEVENTH PAPER (OLD REGULATIONS)

## FIRST HALF

*Examiner*—DR. R. K. MUKHERJI, M.A., PH.D.*The questions are of equal value**Answer ANY THREE questions*

1. Critically examine the theory of a social mind. What are the elements of value in this theory?
2. 'Ancestor-worship is the nucleus of all subsequent forms of religious belief.' Do you agree? Give reasons for your answer.
3. Discuss the effects of militarism and industrialism on the course of social development.
4. Describe the organization and functions of the Indian village communities. What were the causes of their decay?
5. Write a short essay on the evolution of the family.

## SECOND HALF

*Examiner*—MR. P. N. SARKAR, M.A.*Answer ANY THREE questions*

1. Analyse the elements of Public Opinion. Why is the formation of a sound public opinion essential in progressive society?
  2. Examine the rôle of instincts as determiners of industrial harmony and conflict. Discuss with special reference to the present industrial transition in India.
  3. Discuss how far caste has arisen in India from the economic principle of differentiation of function. Illustrate the relations between caste and economic status in the present-day social gradation.
  4. What are the effects of racial admixture on the life and culture of the Bengalees?
  5. Examine the significance of—
    - (a) Worship of *Satya-pir*,
    - (b) *Kulinism*,
    - (c) *Shradha* ceremony,
    - (d) Untouchability.
- and

## (INTERNATIONAL LAW—FIRST PAPER)

SEVENTH PAPER (NEW REGULATIONS)SIXTH PAPER (OLD REGULATIONS)*The questions are of equal value**Candidates are permitted to answer SIX questions in all : THREE from the First Half and THREE from the Second Half*

## FIRST HALF

*Examiner—MR. A. BROWN, M.A., LL.B.*

1. Explain the importance of treaties as a source of International Law. What is the effect of war on treaties to which the belligerents are parties?

2. 'A Successor State never occupies the exact legal position of its predecessor.' Discuss.

3. (i) Can States who are not members of the League of Nations litigate before the permanent Court of International Justice?

(ii) What law would apply to such cases?

(iii) To what extent, if any, does this Court accept the English principle of the binding force of precedents?

4. What is the position of the law relating to bombardments (i) on land, (ii) from aircraft? How far were these rules observed by the belligerents during the last world war.

5. Write notes on any three of the following :—

(i) *Consolato del Mare*, (ii) the law of Nature and *De jure belli ac pacis*, (iii) the Status of Iraq and Manchuria in International Law, (iv) *Jus postliminii*, (v) spies.

## SECOND HALF

*Examiners—MR. P. N. BANERJEE, M.A., B.L., BARRISTER-AT-LAW**Only THREE questions to be answered from this half*

6. Examine historically and critically the doctrine of 'free ships, free goods.'

7. What are the duties of neutral States towards belligerents? How would you describe 'Unneutral Service'?

8. Discuss the principles of law laid down in any three of the following cases?

(i) The Silesian Loan controversy, (ii) the Alabama dispute, (iii) the Thirty Hogsheads of Sugar, (iv) the Indian Chief, (v) *Daimler Co., Ltd. v. Continental Tyre and Rubber Co., Ltd.* (1916 : 2 A.C. 307), (vi) the Maria.

9. Explain the doctrine of continuous voyage. How far has this doctrine been affected by (i) the Declaration of London, (ii) the last world war?

10. Discuss any two of the following :—

(i) Can Japanese submarines in a war between China and Japan exercise the right of visit and search, and for capture of British ships in Chinese waters?



(ii) Can a belligerent warship demand the surrender of the sick and wounded combatants from (a) hospital ships belonging to relief societies, (b) neutral warships?

(iii) Can a belligerent appropriate or destroy enemy vessels found (a) in its ports at the commencement of hostilities, (b) on the high seas?

(iv) (a) Can a belligerent in occupation of enemy territory compel the inhabitants of the latter to take oath of allegiance to it? (b) Can it employ such inhabitants to dig trenches for it? (c) Can such belligerent appropriate cash funds and realisable belonging to the government or of private individuals of the territory under belligerent occupation?

### (INTERNATIONAL LAW—SECOND PAPER)

#### EIGHTH PAPER (NEW REGULATIONS)

#### SEVENTH PAPER (OLD REGULATIONS)

*The questions are of equal value*

#### FIRST HALF

*Examiner—S. C. CHAKRABARTI, M.A.*

*Answer ANY THREE*

1. 'A Prize Court is international in its mission, but national in its organisation.' Discuss this statement.

2. What are the conditions of a valid blockade? Examine the legality of the Anglo-French blockade of Germany during the Great War.

3. What are the rules of international law relating to the transfer of a belligerent vessel to a neutral flag effected before the commencement of war?

4. Discuss the effect of (i) the Covenant of the League of Nations, and (ii) the Kellogg pact, upon the international legal status of 'war.'

5. How is the enemy character of trading corporations determined in time of war? Discuss this question fully, with special reference to the practice of the British Courts during the Great War.

6. State and annotate any two of the following cases:—

(1) *The Rothersand* (1914).

(2) *The Appam* (1916).

(3) *The Harmony* (1800).

(4) *The Springbok* (1866).

(5) *The Kim* (1916).

#### SECOND HALF

*Examiner—MR. N. C. CHATTERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.*

*Answer ANY THREE*

7. State the law as to unneutral service as it stood before the outbreak of the Great War, 1914–1919. Consider the effects of that war upon the law.

8. State the essentials of liability for contraband trading apart from the exceptional practices during the War, 1914—19. Can you deduce from these exceptional practices any principle for future international legislation as to contraband?

9. What are the duties of a neutral State with respect to allowing passage of—

- (i) belligerent troops through its territory,
- (ii) belligerent men-of-war through its maritime belt,
- (iii) belligerent men-of-war through a strait, the whole of which is part of its territorial?

10. State the law as to the carriage of belligerent goods in neutral vessels.

11. Trace the history of the proposal to exempt private property from capture at sea in time of war.

12. Discuss the principles laid down in *any two* of the following cases :—

- (1) *Thirty Hogsheads of Sugar v. Boyle*.
- (2) *The Santissima Trinidad*.
- (3) *The Paquete Habana*.
- (4) *The Indian Chief*.
- (5) *The Franciska*.
- (6) *The Caroline*.

#### EIGHTH PAPER (OLD REGULATIONS)

##### ESSAY

Examiners—	{	DR. B. M. CHAUDHURI, M.A., PH.D.
		PROF. P. N. BANERJEE, M.A., D.Sc., BARRISTER-AT-LAW.
		MR. P. N. BANERJEE, M.A., B.L., BARRISTER-AT-LAW.
		P. C. GHOSH, M.A.
		DR. J. P. NIYOGI, M.A., PH.D.
		MR. S. C. RAY, M.A.
	{	MR. S. C. CHAKRABARTI, M.A.

*All questions are of equal value*

Write an essay on *any one* of the following subjects :—

100

- (a) The present trade depression and its effects.
- (b) The relation between Economics and Politics.
- (c) Democracy and liberty.
- (d) Franchise under the new constitution.
- (e) The trend of modern economic thought.
- (f) Recent advances in political thought.
- (g) The disarmament question.
- (h) The system of international mandates.
- (i) The rise and fall of civilisations.
- (j) The stabilisation of prices.
- (k) Readjustment of financial relations in India.
- (l) The future constitution of India.
- (m) Political ideals, ancient and modern.
- (n) Indian famines : the problems of prevention and relief.
- (o) The jute industry and trade of Bengal.

## ANCIENT INDIAN HISTORY AND CULTURE

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—DR. A. C. DAS, M.A., PH.D.**Only THREE questions are to be answered*

1. Discuss the various interpretations put by Vedic scholars, on the word *Samudra* occurring in the *Ṛgveda*. What light do they throw on the antiquity of the *Ṛgveda*?
2. State what influence, if any, ancient Indian culture exercised on the old civilizations of Mesopotamia, Asia Minor, and Egypt.
3. Briefly state the change of culture among the Vedic Aryans, indicated by *Vṛtra* being looked upon as an *Asura* instead of a *Deva*, the annual Indra-*Vṛtra* conflict, and the ultimate supremacy of Indra over *Varuṇa*, as mentioned in the *Ṛgveda*.
4. Give a short account of the political constitution of the Vedic Aryans, specially referring to the status of the King, and the privileges and powers enjoyed by the people.
5. Discuss the status of women in Vedic society, with special reference to the marriageable age of girls.

## SECOND HALF

*Examiner—DR. V. S. SUKHSANKAR**Only THREE questions are to be answered*

1. Discuss, in detail, the question of the priority of the two Indian epics, the *Rāmāyaṇa* and the *Mahābhārata*, explaining carefully their interrelationship.
2. 'Two types of civilization are embalmed in the *Mahābhārata*,' says Hopkins. Explain and illustrate the statement.
3. Describe briefly the different important strata in the formation of the two Indian epics. Define the attitude of Dahlanu towards this question.
4. Sketch the social and political life of the people as depicted in the *Mahābhārata*, including the position of women in society.
5. Recount, in outline, those outward changes in the life and political outlook of the people of India in accordance with which the social, political and religious material of the epical and legal literature must necessarily be explained, in fact the changes which distinguish the epoch of the epics, *Smṛtis*, etc., from the preceding literary epoch.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—DR. H. C. RAY CHAUDHURI, M.A., PH.D.**Not more than THREE questions are to be attempted*

8. What special circumstances favoured the growth of Magadha as an imperial power? Tell the story of its expansion from the time of Bimbisāra to that of Chandragupta Maurya.

2. How did the Indians meet the Macedonian and Greek menace during the centuries immediately preceding the Christian era? Refer, in this connection, to the parts played by the kings of Taxila, Pāṭaliputra, and Vidiśā.

3. Write a critical note on the political and administrative achievements of Aśoka's reign. Refer to the sources of your information.

4. State what you know of the Vajjis (Licchavis) and the Yaudheyas.

5. Write a short essay on any one of the following topics :—

(a) History of Bengal up to 500 A.D.

(b) The distinctive character of the political history of the Far South.

(c) Gāndhāra—a meeting-ground of races and cultures.

## SECOND HALF

*Examiner*—DR. N. C. BANERJEE, M.A., PH.D.

*Only THREE questions are to be answered*

1. Discuss the chronology—

*either of the Sātavāhanas,*

*or of the Kusbānas.*

2. Give a short account of the Śaka invasion of India and the establishment of Śaka political power in Northern and Western India.

3. Discuss the extent of Samudragupta's conquests, and give an account of the Gupta system of government.

4. Sketch the career of Khāravela, and discuss his relations with the rulers of Magadha and the Deccan.

5. Write critical notes on any two of the following :—

(a) Gondophernes.

(b) The Ābhīras.

(c) The Pushyamitras.

(d) The Mahābhōjas.

## THIRD PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—DR. H. C. RAYCHAUDHURI, M.A., PH.D.

*Not more than THREE questions to be attempted*

1. Write a short account of the Pallavas of Kāñchī, with special reference to their relations with (a) the Guptas of Magadha, and (b) the Chalukyas of the Deccan.

2. Discuss the relations of the Cholas with (a) the Rāshtrakūṭas of Mānya-kheṭa, (b) the Pālas of Bengal, and (c) the dynasties of Kalyāṇa.

3. Compare Pulakesin II of the early Chalukya dynasty and Vikramāditya VI of the later Chalukya dynasty as (a) conquerors, (b) defenders of their country against external aggression, and (c) patrons of art and literature.

4. What do you consider to be the distinctive features of the history of the Rashtrakūṭas of Malkhed?
5. Who were the kings of the Seuna-desa? Tell briefly the story of their struggles with neighbouring powers.
6. Write short notes on *any four* of the following :—
  - (a) The eastern Chalukyas of Vengī.
  - (b) Local self-government under the Cholas.
  - (c) Kaṭāram and Nakkavāram.
  - (d) Govindachandra of Vanvāladesam.
  - (e) Bilhana.
  - (f) The Lūṅgāyats
  - (g) Vira Vallāla III.

## SECOND HALF

*Examiner*—DR. HEMCHANDRA RAY, M.A. PH.D.

*Attempt THREE questions only*

1. 'The year 647 marks the beginning of the Mediæval period of Indian history.' Do you agree with this view? Give reasons for your answer.
2. Give a short account of the life and times of Kalhana, the author of the *Rajatarangini*, with special reference to—
  - (a) his sources,
  - (b) his critical acumen,
  - (c) his chronological system.
 and
3. Write a brief account of the history of Nepāla during the period c. 600 to 879 A.D., with special reference to the parts played by Amsuvarman and Jisnugupta.
4. Give an account of the reign of Narasimha I (c. 1238—60 A.D.), the Gaṅga king of Kaliagonagara.
5. Give an account of the struggle of the Śāhis of Afghanistan and the Punjab with foreign invaders during the period c. 650 to 1026 A.D.
6. Write a short account of the Senas of Bengal, with special reference to—
  - (a) their origin,
  - (b) their wars and alliances,
  - (c) their religion,
  - (d) their struggle with foreign invaders.
 and

## FOURTH PAPER

## FIRST HALF

*Examiner*—MR. H. C. CHAKRADAR, M.A.

*The questions are of equal value*

*Answer only THREE questions from EACH half*

1. Draw a map of India, locating the following Vedic peoples :—  
 Uśīnara, Kīkaṣa, Chedi, Puru, Krivi, Bharata, Paktha, Andhra, Kosala, Aūga, Madra, and Bhalānasa.  
 Give your reasons as far as possible in support of your locations.

2. Describe the geography of Southern India as given in the *Rāmāyaṇa*.
3. Discuss the Puranic conception of India and show how far it was based on a real knowledge of the geography of India.
4. Discuss the location of the City and Province of *Gauḍa*.
5. Indicate the extent of the countries in India and Afghanistan conquered or ruled over by the 'successors of Alexander the great.' Locate also the cities occupied by them.

## SECOND HALF

*Examiner*—DR. P. C. BAGCHI M.A., D.LITT.

6. Discuss the value of the Chinese records in the study of the ancient geography of India.
7. Locate the countries conquered by Rajendra Coladeva I in and outside India.
8. Write a short note on ancient Indian navigation, with special reference to the ports on the western coast of India.
9. Describe the extent of the ancient cultural zone of India in Farther India.  
What do you know of the routes by which this expansion took place?
10. Write geographical notes on the following :—  
Hippokura, Dandagula, Su-p'o-fa-su-tu, Tu-cha-she lo, and Puṇḍravardhana.

## GROUP I

ARCHÆOLOGY—EPIGRAPHY, ETC.

### FIFTH PAPER

*The figures in the margin indicate full marks*

Attempt THREE questions from EACH group, of which  
Question 1 must be one

## GROUP A

*Examiner*—PROF. D. R. BHANDARKAR, M.A., PH.D.

1. Translate four of the following extracts into English, adding critical and explanatory notes where necessary :— 20

(a) Etāye me aṭṭhāye dhamma-sāvaṇāni sāvaṇipāṇi dhammānusa-thini vividhāni ānapitāni yathā pulisā pi bahune janasi āyatā e te pali-yovadisanti pi pavṭhalisanti pi lajūka pi bahukesu pāna-sata-sahasasu āyatā te pi me ānapitū hevaṃ cha hevaṃ cha paliyovadātha janaṃ dhamma-yutaṃ.

(b) Hevaṃ chu kho esa dekhīye imāni āsava-gāmini nāma aṭṭha chaṇḍīye niṭṭhūlīye kodhe māne isyā kālanena va hakaṃ mā palibhasayisam esa bāḍha dekhīye iyaṃ me hidatikāye iyaṃmaṃ me pālātikāye.

(c) Atikātaṃ aṃtaraṃ rājāno vihāra-yātāṃ ṇayāsu eta magavyā aññāni cha etārisaṃ abhiramakāni ahuṃsa so Devānaṃpriyo Piyadasi rājā dāsa-vaśābhisito saṃto ayāya Sambodhiṃ tenesa dhamma-yātā.

(d) Sāra-vaḍḍhi tu bahuvividhā tassa tu idaṃ mūlaṃ ya vachhi-gutṭi kiṃti ātpa-pāsamaṇḍa-pūḷā va para-pāsamaṇḍa-garabā va no bhavē aprakaraṇaṃhi labhukā va asa tamhi tamhi pakaraṇe pūjetayā tu eva para-pāsamaṇḍā tena tena prakaraṇeṇa.

(e) Silā vigadḍhī chā kālāpita silā-thabhe cha usapā-pite hida Bhagavaṃ jāte ti Lumuṇi-gāṇa ubalike kaṭe aṭṭha-bhāgiye cha.

(f) Imāni bhaṃte dhaṃma-paliyāyāni Viuaya-samu-kase Aliya-vaṣāni Anāgata bhayāni Muni-gāthā Moneya-sūte Upatissa pasine e chā Lāghulovāde musā-vādaṃ adhi-gichya bhagavatā Budhena bhāsīte etāni.

2. Name and identify the 'border peoples' mentioned in the edicts of Aśoka. Show from his edicts that Aśoka's attitude towards his neighbours was one of general benevolence. 15

3. Discuss the date of accession and the chronology of the reign of Aśoka in light of his edicts and traditions. 15

4. In what year of his reign did Aśoka conquer Kalinga? How far did the conquest of Kalinga prove the turning point in the career of Aśoka? 15

5. Ascertainment from the edicts the existence of the cult of the previous Buddhas in the time of Aśoka and his attitude towards it. State what you know of the religious sects mentioned in the edicts. 15

### GROUP B

*Examiner*—DR. N. G. CHAKRABARTI, M.A., PH.D.

1. Transcribe *two* of the extracts quoted in Question 1, Group A, in a script prevalent in India in the third century B.C., and discuss their linguistic peculiarities also. 18

2. Write all that you know of the Śuṅgas from literature and inscription :— 16

3. (a) Translate into English and comment fully on the following inscriptions :— 16

Suganaṃ raje raṇo Gāgī-putasa Viśadevasa paṇṇa Goti-putasa Āgarajusa putṇa Vāchhi-putena Dhana-bhūtiṇa kārītaṃ toraṇaṃ sila-kammarito cha upamaṇo.

(b) Do you find the name of the above doner in any other inscription?

4. Discuss the date of Khāravela from the synchronisms found in the Hāthīgumphā inscription. 16

5. Write short notes on *any eight* of the following :— 16

Airena. Cheta-ṛāja-vasa-vadhanena, Vajiraghara, khalotika-pevata, Mahāvijayaṃ pāsādaṃ, Vacha-bhūmikā, Maka, Bhoja-Pitinikesu, Pādesike, agi-khaṇḍhāni, and dhaṃma-maṃgalāni.

### SIXTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

*Examiner*—MR. JITENDRANATH BANERJI, M.A.

*Attempt ANY THREE questions, of which No. 5 must be one*

1. Trace the political relations between the Western Kṣatrapas and the Śātavāhanas mainly from their inscriptions. 14





## SEVENTH PAPER

## (NUMISMATICS)

*The questions are of equal value*

*Only THREE questions are to be attempted from EACH half*

## FIRST HALF

*Examiner—Mr. JITENDRANATH BANERJEE, M.A.*

1. What light do old indigenous coins throw on the existence of 'forms of government other than the ordinary type of oriental despotism' in Ancient India?

2. (a) 'I incline rather to assign the coins to a local dynasty of princess.' Do you agree with the above remark of Cunningham about a certain class of copper coins mainly found in 'the old kingdom of Kosala'?

(b) Describe the special features of the Ayodhya Mitra coins.

3. Reconstruct the history of the gradual conquest of North-western India by the Bactrian Greeks, mainly from their coins?

By whom were they ousted from their Bactrian possessions?

4. (a) Show the historical importance of the coins of Aspavarma.

(b) Explain the legends in the coins of Orthagnes.

(c) Who was Kharahostes? What do you know about his coins?

5. Write what you know about *any three* of the following:—

(a) Helikles-Laodike coins.

(b) Coins of 'Soter Megas.'

(c) Legends on the obverse of the coins of the Kanishka group of kings.

(d) The varied reverse devices of Kanishka's coins.

(e) Coins of the Later Kushans.

## SE A

*Examiner—Mr. K. N. DIKSHIT, M.A.*

1. (a) What are the grounds for supposing that the oldest known coins of the Andhra dynasty come from their northernmost territory?

(b) When does the title Mahara'ia appear first on Western Kshatrapa coins? How would you explain its presence?

2. (a) Discuss the relations between the two Kshatrapa families of Western India, in particular the numismatic evidence bearing on their relation with a suzerain power.

(b) 'The main characteristics of the peculiar coinage of each province of an empire have often remained unchanged, not only by changes of dynasty, but even by the transference of power from one race to another.' Discuss this with reference to the Andhra and Gupta empires.

3. (a) Arrange the various types of the gold coins of Samudragupta according to the probable sequence of their issue.

(b) Classify the silver issues of Kumāragupta I, and assign them to the various localities where they were struck.





*Facing page 739*

4. How would you fix the order and relation of the successors of Skandagupta? Does the evidence of coins reveal the existence of any kings contemporary with the rulers known from the Bhitari seal?

5. Write what you know of the following :—

- (1) Sadakana Kajsia.
- (2) Sopara coins of Yajña-śri.
- (3) Iśvaradatta coins.
- (4) Kācha type.
- (5) Bharsar hoard.

### EIGHTH PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

Examiners—{ Mr. JITENDRANATH BANERJEE, M.A.  
Prof. D. R. BHANDARKAR, M.A., PH.D.

Write an essay on *any one* of the following subjects :—

50

- (1) Origin and development of coinage indigenous to Ancient India.
- (2) Coins of Ancient India—as a source for the reconstruction of her history.
- (3) Origin of the Brahmi-lipi.

#### SECOND HALF

Examiner—Prof. D. R. BHANDARKAR, M.A., PH.D.

1. Describe *any six* of the types of coins reproduced on the attached plate, and add your remarks on each. 50

### GROUP II

#### ARCHAEOLOGY—FINE ARTS

#### FIFTH PAPER

*The questions are of equal value*

#### FIRST HALF

Examiner—Dr. H. C. RAYCHAUDHURI, M.A., PH.D.

*Not more than THREE questions are to be attempted*

1. Estimate the influence exercised by Persian and Hellenic models on the early art of the Gangetic Provinces and Gandhāra.

2. Point out the general characteristics of late Maurya and early Sunga art, with special reference to the sculptural remains at Sārnāth and Bhṛ̥gā.
3. Compare the art of Sāncī with that of Bhārhut and Amarāvati.
4. Trace briefly the development of Painting in Pre-Gupta India.
5. What are the chief artistic merits of the Ajañṭā frescoes?

## SECOND HALF

*Examiner*—Dr. KALIDAS NAG, M.A., D.LITT.

*Attempt ANY THREE of the following, Question No. 5 being compulsory*

1. What evidence have you got to demonstrate that the figuration of human form in Indian art was much earlier than that of the Graeco-Buddhist carvings?
2. Discuss the importance of the Pallavas in the history of Indian and Greater Indian Art.
3. Trace the influence of early Indian painting on the pictorial traditions of other countries of Asia.
4. Write a historical note on the art of the Pāla period and its relation to the art developments of Indonesia.
5. Write an essay on :—  
The Art remains of the Indus Valley civilisation.

## SIXTH PAPER

### (ICONOGRAPHY)

*The questions are of equal value*

## FIRST HALF

*Examiner*—Mr. JITENDRANATH BANERJEE, M.A.

*Attempt ANY THREE, of which Question No. 2 must be one*

1. 'The origin of image worship in India appears to be very ancient and its causes are not exactly known'. (*Gopinath Rao*.) Discuss.
2. Identify the deity reproduced in the attached plate marked A and fully describe the relief.
3. 'No icon of the Sun god is to be found in ancient Indian art till a comparatively late period.' Elucidate.

Add, in this connection, explanatory notes on the special features of the Sūrya images of Northern and Southern India.

4. Write descriptive notes on the iconography of any four of the following :—

(a) *Goja-Lakṣmī*; (b) *Guḍimallam Liṅga*; (c) *Liṅgodbharamurti* (from Ellora); (d) *Andhakāsuravadha-murti* (Dāsavatāra cave, Ellora); (e) *Rāvanānugrahamurti* (Ellora); (f) *Naṭarāja* (Madras Museum).

5. Write a short essay on 'the contribution of sectarianism in religion on the growth and development of icono-plastic art in Ancient India.'

CALENDAR, PART III, 1982



PLATE A.—(For Question 2 First Half)

*Facing page 740*



## SECOND HALF

*Examiner*—Dr. N. K. BHATTASALI, M.A.

*Answer Question 5 and ANY TWO from the rest*

1. Write a critical note on the sculptural representations of Saṅgata Jātaka..

2. Describe the relationship of the Dhyāni Buddhas, Bodhisattvas, and Mānuṣī Buddhas in the latest development of the Mahāyāna Buddhism. How would you recognise images of the Dhyāni Buddhas, and how would you distinguish between an image of Akṣebhya and that of Gautama Buddha in Bhūmisparśa Mudrā?

3. What are the principal emanations from Amitābha? Describe, in detail, an image of Bhṛkuṣi emanated from Amitābha.

4. Describe briefly the special iconographical features of any three of the following conceptions :—

(i) Arapachana, (ii) Simhanāda, (iii) Khasarpaṇa, (iv) Hari-hari-hari-vāhanodbhava, (v) Heruka.

5. Identify and describe the special features of the deities represented on Plates B and C.

## SEVENTH PAPER

*The questions are of equal value*

*Only THREE questions need be attempted from EACH half*

## FIRST HALF

*Examiner*—Dr. STELLA KRAMRISCH, Ph.D.

1. Describe the principal features of the Gupta style of architecture as illustrated in the examples from Central India. Which of the features can you trace to earlier examples, and which would you attribute to the spirit of the Gupta age?

2. 'The choice of material has always profoundly affected the style of architecture in every country.' Illustrate this with reference to the architecture of Northern India.

3. (a) What reaction has there been between the structural and rock-cut styles of temple architecture in the Deccan?

(b) Trace the development of the Brahmanical cave temples at Ellora, Elephanta, and Jogesvari.

4. Describe the principal Jaina temples of Kathiawar and Rajputana, and compare them with the contemporary Hindu temples of North Gujarat. Can you justify the characterisation of the Jaina temples as the Jaina style of architecture?

5. Write what you know of :—

(1) Sarvatobhadra plan.

(2) Caryatid figures.

(3) Bell and chain ornament.

(4) Dwarf capital.



## SECOND HALF

*Examiner*—MR. K. N. DIKSHIT, M.A.

1. Which are the main trends of evolution in Nāgara temple architecture from the 9th to the 18th century, and which are the most outstanding provincial peculiarities?

2. Write an essay on structural edifices, religious and profane, of the Śaṅga period, with the help of contemporary relief representations.

3. Analyse the following motifs, with a view to the part played by them in the architectonic development :—

(1) Railug.

(2) Āmalaka.

(3) Yakṣinī (woman and tree motif).

4. Describe the earliest existing attempts at spire formations in the northern half of India.

5. Give a detailed account of the evolution of the Piṇḍadeul in Kaliṅga during the Mediæval period.

## EIGHTH PAPER

*The questions are of equal value*

*Attempt only THREE questions from EACH half*

## FIRST HALF

*Examiner*—DR. R. C. MAZUMDAR, M.A., PH.D.

1. Describe the Chaitya cave at Karle and explain its distinguishing features.

2. Trace the gradual evolution of façades in the Buddhist caves. What peculiarities do you notice in the façade of Viśvakarma cave at Ellora?

3. Indicate the main stages in the evolution of the Vihāra caves in the Deccan.

4. Describe the architectural peculiarities of the Dharmarāja Rath and its external decoration. Discuss the view that the Dharmarāja Rath 'closely resembles the pyramidal monasteries of ancient India in the north as well as in the south.'

5. Describe the Great Temple of Elephanta and discuss Havell's views about its antiquity and importance.

## SECOND HALF

*Examiner*—DR. STELLA KRAMRISCH, PH.D.

1. Discuss the influence of the Rathas at Māmallapuram on later Indian architecture.

2. Write a critical note on the stylistic relation between Kailāsanātha temple at Kāñci, Virūpākṣa temple at Paṭṭadakal, and the Kailāsanātha rock-temple at Elūrā.

8. Define the position of the Veśāra style with regard to Dravida and Nāgara traditions, and point out its peculiar traits.

4. Give your reasons which of the three main groups, i.e., Nāgara, Dravida, or Veśāra, of Indian temple architecture you would consider artistically the most productive.

5. Compare the representations of buildings in the reliefs of Southern and Northern India from the 2nd century B.C. to the 2nd century A.D. Is it possible to differentiate between Southern and Northern types?

## ANCIENT INDIAN HISTORY

### GROUP III

#### SOCIAL AND CONSTITUTIONAL HISTORY

#### FIFTH PAPER

*The questions are of equal value*

#### FIRST HALF

*Examiner*—DR. R. SHAMASASTRI, B.A., PH.D.

*Attempt ANY THREE of the questions*

1. Elucidate how far the theory of Āśramas or the theory of elevation and degradation of castes, as laid down in the Dharma literature, was observed in practice.

2. Write explanatory notes on the following, and deduce the marriage-laws implied therefrom :—

(1) Pālāgali, (2) Parivṛiklā, (3) Sapatnī, (4) Parivitta, (5) Punarbhū, (6) Agre-didhishu-pati.

3. Elucidate the five calamitous circumstances in which women were authorised to marry a second husband.

4. Write a short note on the importance of the Grihyasūtras for a comparative study of customs.

5. Describe the methods of disposal of the dead as given in the Indian Epics. Have we any evidences of the custom of Sati in them?

#### SECOND HALF

*Examiner*—MR HARANCHANDRA CHAKLADAR, M.A.

*Attempt THREE questions only*

1. Give an account of the social grades among Indo-Aryan peoples as described in Pāli Buddhist literature. Compare it with the account derived from Brahminical sources.

2. Compare the Buddhist monastic organisation with the Brahminical one.

3. Discuss how far early Indian customs show any traces of Indo-European origin.

4. Bring out the importance of the Household Fire in the life of the Vedic Indian and describe the rites connected with it.

5. Write notes on the following :—

*Indrāṇīkarma, Madhuparka, Pākayajña, Aṣṭakā, Āgrahyaṇī, Pratyavarohaṇa.*

## ANCIENT INDIAN HISTORY AND CULTURE

## GROUP III

## SOCIAL AND CONSTITUTIONAL HISTORY

## SIXTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. NARAYANCHANDRA BANERJEE, M.A., PH.D.*Only THREE questions are to be answered*

1. Sketch the economic life described in the Arthaśāstra, with special reference to State help to agriculture and the protection of labouring classes.
2. Discuss the theory of the ownership of land in ancient India during the Vedic and the Maurya periods.
3. Give a short account of the chief industries of ancient India, and mention the chief centres of production.
4. Show how the evils of capitalism came to be denounced by ancient Hindu thinkers, and mention the steps taken by them to put down the exploitation of the poor by the rich.
5. Write critical notes on any three of the following :—
  - (1) State monopolies in the Arthaśāstra.
  - (2) Prohibition of child labour.
  - (3) Maintenance of royal granaries.
  - (4) Control of prices and profits by the Maurya State.
  - (5) The overland trade route to Western Asia.

## SECOND HALF

*Examiner*—DR. H. C. RAY, M.A., PH.D.*Attempt not more than THREE questions*

1. 'In its "land-policy" the State of Kauṭilya follows a distinctly socialistic programme.' Critically examine this statement.
2. Write a short note on the origin and development of currency in ancient India.
3. 'The *Periplus of the Erythraean Sea* is one of those human documents, like the journals of Marco Polo and Columbus, which expresses not only individual enterprise, but the awakening of a whole race toward new fields of geographical discovery and commercial achievement.' Discuss.
4. 'As the leech, the calf, and the bee take their food little by little, even so must the king draw from his realm moderate annual taxes.' How far is this statement applicable to the actualities of ancient Indian taxation? Give a list of some of the more important taxes in ancient India.
5. 'The policy of Kauṭilya towards trade and commerce was one of active interference.' Discuss.

## SEVENTH PAPER

*The questions are of equal value*

*Candidates are to answer only SIX questions, THREE from EACH half*

## FIRST HALF

*Examiner*—DR. NARAYAN CHANDRA BANERJEE, M.A., PH.D.

1. Sketch the history of the various schools of political thought in ancient India, with a special reference to the data available in the *Kauṭilya* and the *Sāntiparvan*.

2. Discuss the different theories about the origin of the State and kingship in ancient India.

3. What are the political ideals of the author of the *Manusamhitā*? Compare them with those of Kautilya.

4. Analyse the political life as depicted in the *Jātakas*, and show how it indicates a transition from the primitive democracy to the centralized monarchy of the Maurya type.

5. Write critical notes on *any two* of the followinig :—

(a) The position of ministers in an ancient Indian State.

(b) Sources of revenue in Hindu India.

(c) The place of the people in the administration of ancient Indian States.

## SECOND HALF

*Examiner*—DR. NARENDRANATH LAW, M.A., PH.D.

6. Discuss how with Kautilya 'war was not an end in itself nor was it the best of means.'

7. Explain 'ari-sampad-yuktaḥ sāmantaḥ śatruḥ', and show how the principle underlying the passage was the basis of the theory of Maṇḍala.

8. Discuss the functions of the Hindu State, and show how the ancient Indian thinkers anticipated the moderns in the solution of many of the difficulties that confront the State and the people.

9. Delineate the various circumstances in which each of the six *guṇas* (courses of action) is recommended for adoptions. What is the difference between one who has resorted to *saṃśraya* and one who is *daṇḍopanata*?

10. Write notes on *any three* of the following :—

(a) Kautilya's attitude to the Saṅghas.

(b) *Dvaidhibhāva*.

(c) *Anavasita-sandhi*.

(d) The relation between the *Vijigīṣu* and the *Madhyama*.

## M.A. EXAMINATION

## EIGHTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. HARAN CHANDRA CHAKLADAR, M.A.*Only THREE questions are to be attempted*

1. Discuss the origin of the Dravidians. How do you distinguish them from the other peoples of India?
2. Indicate the physical characters and distribution of the Armeno-Pamirians
3. Distinguish the three main types into which the people of Europe may be divided, and indicate how far each of them has affinity with the various groups of people in India.
4. Discuss the relation between the Leucoderms and Xanthoderms in Asia and the probable areas of their specialisation.
5. Indicate the ethnic elements that make up the people of Tibet.

## SECOND HALF

*Examiner*—RAI BAHADUR SARAT CHANDRA RAY, M.A.*Attempt ANY THREE questions*

1. Describe the sociological features and functions of the caste system.
2. State and discuss the various theories of the origin of caste in India, and give your own views with your reasons.
3. What peoples would you group as the 'Pre-Dravidians'? Describe their physical and cultural characteristics.
4. Give an account of the racial history of India.
5. Define 'couvade', 'cross-cousin marriage', 'polyandry', 'avunculate', and 'dual organization'. Name the tribes and castes of India among whom these social institutions are in vogue.

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## GROUP IV

## RELIGIOUS HISTORY

## FIFTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. ABINASCHANDRA DAS, M.A., PH.D.*Only THREE questions are to be answered*

1. Who were the three principal *Devas* mentioned in the *Rgveda*? Discuss how this number gradually increased to 33, and ultimately to 3,333 or infinite.
2. Show how the Vedic Aryans discovered the unity of the Godhead in the midst of diversity and realized that there was only One Being manifested in the many.

3. What was the general outlook of the Vedic Aryans on life? Show how it helped them to make material progress along with their spiritual advancement?

4. Discuss whether there was Image-worship in Vedic times. How would you account for the anthropomorphical description of the *Devas* in the *R̥gveda*?

5. Write short notes on the following :—

*Rudra, the Maruts, Arumagha Brahmans, Asura, Mitravaruna, Aditi, Māṛiṇḍa.*

## SECOND HALF

*Examiner*—PROF. D. R. BHANDARKAR, M.A., PH.D.

*Only THREE questions are to be answered*

1. Who was *Harmavati Umā*, as described in the *Kena-Upaniṣad*? What are Her functions as suggested by it?

2. Briefly describe how the Vedic Aryans conceived the idea of the creation of the world.

3. Briefly describe the modes of disposing of dead bodies prevalent in Vedic times. What was the inwardness of the custom of Cremation among the Vedic Aryans, and how did it lead to a schism between two principal branches of the race?

4. Briefly describe the *Iṣṭi-yāga*.

5. Explain the following terms :—

*Agnihotra-havani, Puroddāsa, Kapāla Dhrurā, Prastara, Ahina, Agnī, Dakṣiṇāgni.*

## SIXTH PAPER

### EPIC AND PURĀṆIC RELIGION

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

## FIRST HALF

*Examiner*—DR. HEMCHANDRA RAYCHAUDHARI, M.A., PH.D.

1. 'By the time the epics were composed the phenomenal side was greatly obscured. Anthropomorphism had rendered even Sun and Moon quite human.' Explain.

2. How were gods worshipped in the Epic Period?

3. Brahmā 'is at once creator, preserver, and destroyer, combining in himself, in the earlier epic. The functions later appropriated by other gods.' Critically examine this statement.

4. 'The theory of Avatars is still developing in the epic.' Elucidate.

5. Write notes on *any three* of the following :—

(a) *Daivam eva param manye.*

(b) *Pratimāś ca prakampante avidyanti ca hasanti ca.*

(c) 'Some explain him as son of Pitāmaha; some say he is son of Mahesvara; some say he is son of Vibhāvasu. He is a mysterious being (*Sarvagūhyamaya*).

(d) The Cosmic Rhythm.

## SECOND HALF

*Examiner*—JITENDRANATH BANERJEE, M.A.

1. Critically examine the literary as well as archæological evidence with regard to the beginnings of the Vāsudeva cult.

2. Give a brief account of the main tenets of the *Sṛisampradāya* sect of Vaiṣṇavism.

3. 'There lived a certain person of the name of Lakulin who founded a Pāsupata system.' Justify the statement.

Also refer briefly to the essential principles of this system in its developed form.

4. 'Considered historically, Śāktism appears to be a compound of Hinduism with un-Aryan beliefs.' Discuss.

5. Write an essay on *any one* of the following :—

(a) Solar worship in Ancient India.

(b) The sect of Gāṇapatīyas.

## SEVENTH PAPER

*Examiners*— $\left\{ \begin{array}{l} \text{DR. P. C. BAGCHI, M.A., D.LITT.} \\ \text{DR. NALINAKSHA DATTA, M.A., B.L., PH.D.,} \\ \text{D.LITT.} \end{array} \right.$

*The questions are of equal value*

*Answer ANY SIX questions*

1. Give an outline of the various sources of information regarding Buddhism from the 5th century B.C. to the 5th century A.C.

2. How much of the Upaniṣadic doctrines is traceable in ancient Buddhism? Point out the distinct contributions, if any, made by Buddhism to the stock of original thought in India.

3. Explain how Sila, Samādhi, and Prajñā comprise the whole of Buddhist discipline.

4. Delineate the life of a monk in a Buddhist monastery, and show that the monastery was not merely a centre for religious purposes but also for the advancement and dissemination of Buddhist culture generally.

5. Name some of the most prominent schools of Buddhism and write accounts of their origin, centres of popularity, and doctrinal differences.

6. Point out the difference between the views of Sāṃkhya and Vaiśeṣika on one side, Theravāda and Sarvāstivāda on the other.

7. (a) Show how far Buddhism owes its greatness to foreigners both within and outside India.

(b) Point out the usefulness of Chinese and Tibetan translations for our knowledge of Buddhism and Buddhist literature.

8. State the various causes which led to the decadence of Buddhism in India.

9. Mention the fundamental points of difference between Hinayāna and Mahāyāna.

10. Give an account of the important manuscript remains of Buddhist literature found in E. Turkestan. What light is thrown by them on the state of Buddhism in E. Turkestan? Do they help us in any way in ascertaining the probable date of the Pāli canon?

## EIGHTH PAPER

Examiners—{ PROF. B. M. BARUA, M.A., D.LITT.  
MR. H. C. RAYCHOUDHURI, M.A., PH.D.

The questions are of equal value

Answer ANY SIX of the following questions

1. Describe briefly the heterodox tendencies in the religious thought of India that prepared the way for the rise of Jainism.
2. Who were the Nirgranthas and what were their doctrines? Can they be distinguished from the followers of Mahāvīra?
3. The religious belief of Makkhali Gossāla has been defined as *pariṇāma-vāda*. What was it and how far can it be illustrated from the personal life of its promulgator?
4. Comment on the points of contact between the Ājīvika and the Jaina faith?
5. Give in its bare outline the history of the Jaina church from the demise of Mahāvīra up to the great schism.
6. What was the central conception of Jainism? How far was it a distinct addition to the religious thought of Ancient India?
7. What are the sources for a historical study of Jainism? Give a critical estimate of them.
8. Discuss the date and the authenticity of the *Āyārāṅga sūtra* and determine its place in the Jaina canon.
9. What do you know about the ancient schools of Jainism? Determine how far they were characterised by doctrinal differences.
10. Define the following :—  
*Syād-vāda*, *leśyā*, *jñāna*, *jīva*, and *aṇu*.



## (GROUP V)

## (ASTRONOMY AND MATHEMATICS)

## FIFTH PAPER

Examiners—{ MR. HARANCHANDRA CHAKLADAR, M.A.  
MR. NARENDRAKUMAR MAJUMDAR, M.A.

Candidates are permitted to attempt not more than  
SIX questions

The questions are of equal value

1. Give a brief history of the Sacrifice in the Vedic times.
2. What is the object of the *Sulba Sūtras*? Discuss the position of the *Sulba Sūtras* in the Ritual Literature of India.
3. What are the different systems of *Sulba Sūtras* hitherto discovered? What are their general contents and characteristics? Compare and contrast the following *Sulba Sūtras* : Baudhāyana's, Apastamba, and Mānava.



4. Give a complete neat diagram, indicating the positions of *Vali-sālam*, *Prāgvaṃśam*, *Mahāvedi*, *Uttaravedi*, *Sadas*, *Dhīṅnyas*, and *Havīrdhāna*. What is usually the measure of a *prakrama*? What is the measure of a *prakrama* in the 'Yūpaikādaśinī Vēdi'?

5. (a) Give the rule for the square of the diagonal of a rectangle, with numerical rational illustrations. Give examples where practical use is made of such rules. Discuss the questions of indebtedness to other countries.

(b) Shew how to turn a rectangle into a square, and a square into a rectangle. Comment on any differences you notice between the procedures recommended by Āpastamba and Baudhāyana.

6. Give a brief discussion of the general directions given by Baudhāyana on the construction of 'Agni'.

Describe what bricks are or are not to be employed, and how 'bheda' is to be avoided.

7 Explain fully how an 'Agni' of a larger area is to be constructed, when the method of construction of the 'seven-fold Agni' is given.

Fully comment on the rules of Āpastamba and Baudhāyana, and draw your own conclusions as to the relative ages of the two systems.

8. Fully describe the construction of the 'Vakrāṅg-Kurmacit' according to Baudhāyana, giving measurement of area, construction of bricks, and laying of bricks in the first and the second layers, as well as a neat diagram.

9. Describe the construction of the 'Śmaśānait' according to Baudhāyana.

10. Describe the construction of the 'Vakrapakṣa vyasta-puccha-Śyenait' according to Āpastamba.

## SIXTH PAPER

*The question are of equal value*

*Full marks for SIX questions, THREE from EACH half*

### FIRST HALF

*Examiner—DR. B. B. DUTT, D.Sc.*

1. Describe fully Aryabhata's method of constructing his trigonometrical table, and show how to use it to find the versed sine of an angle. State and prove the formula derived by him therefrom.

2. Give Aryabhata's formula for finding the number of terms of a series in A.P. whose first term, common difference, and sum are known. Hence find his method of solving the affected quadratic equation.

3. Indicate Aryabhata's process for finding the circumference of a circle of diameter 20,000. State also the final result obtained by him. What is the order of its approximation as compared with the Greek and modern values?

4. Find, after Aryabhata as well as Bhaskara II, the number  $N$  which, when divided by 34 leaves the remainder 2, and when divided by 13 leaves remainder 5.

5 Write a brief account of the early history of the principle of the place-value in numeral notation.

## SECOND HALF

Examiner—MR. PRABODHCHANDRA SENGUPTA, M.A.

6. Find the solutions of Bhaskara II for

$$x^2 + y^2 + 1 = u^2$$

$$z^2 - y^2 + 1 = v^2$$

7. State and criticise Brahmagupta's rule for the solution of the equation

$$axy = bx + cy + d.$$

What are Bhaskara II's solutions of the same?

8. State and explain Brahmagupta's rule for finding the diagonals of a cyclic quadrilateral. How far was Bhaskara II right in criticising it?

9. Apply the Cyclic Method to solve in positive integers

$$71x^2 + 1 = y^2,$$

10. Solve, after Bhaskara II, the following problems :—

- (1) An octagonal room has eight doors. In how many ways can the doors be opened?
- (2) How many different numbers of six digits can be formed out of figures 1, 2, ..... 9 without repeating any in a number?

## SEVENTH PAPER

The questions are of equal value

Only SIX questions are to be attempted; THREE from EACH half

## FIRST HALF

Examiner—MR. PRABODHCHANDRA SENGUPTA, M.A.

1. In a *Mahāyuga*, according to the modern *Sūrya Siddhānta*, the sun's revolutions are 4320000 and there are 1593336 intercalary months and 25082252 omitted lunar days. From these elements deduce (i) the moon's revolutions, (ii) the number of civil days, and (iii) the number of sidereal days in a *Mahāyuga*.

2. According to the *Sūrya-Siddhānta*, the sun's equation of the centre is

$$= - \frac{(14^\circ + 20' \sin \theta) \times 3438' \sin \theta}{360^\circ},$$

where  $\theta$  is the angular distance of the mean sun from the apogee. Examine how far this deviates from its epicyclic value.

3. Prove the *Sūrya-Siddhānta* rule for the instantaneous daily motion of a superior planet which is given as

$$= w - \frac{(w' - w)(H - R)}{H},$$

where  $w$  is the apparent heliocentric and  $w'$  the mean daily motions, of the planet and of the mean sun,  $H$  the *Sighra* hypotenuse, and  $R$  the radius.

4. Prove the following time-altitude equation of the *Sūrya-Siddhānta* :—  
*R* vers (Hour angle)

$$= \{R + R \sin (\text{chara})\} - \frac{R}{R \cos \delta} \times \frac{R}{R \cos \phi} \\ \times \sqrt{R^2 - \left( \frac{\text{Shadow} \times R}{\text{Hyp. of Shadow}} \right)^2}$$

Reduce the equation to its modern form also.

5. Explain the method of the *Sūrya-Siddhānta* for finding the apparent longitude of the sun from the noon-shadow of the gnomon.  
 6. Write an essay on 'Is the epicyclic theory a later addition in the *Sūrya-Siddhānta*'?

## SECOND HALF

Examiner—PANDIT BABUA MISRA, JYOTISHACHARYYA.

1. 'अल्पावशिष्टे तु कृते मयो नाम महासुर' इत्युक्त्या निरुक्तः सूर्यसिद्धान्त-रचनासमयस्तदितिहासश्च समीचीनो न वा ? असमीचीनश्चेत्तद्वचनासमयः सप्रमाणं विवेचनीयः ।

2. सौरचान्द्रनाक्षत्रसावनाख्यानि चत्वारि मानानि किंस्वरूपाणि ? किमर्थं वा कल्पितानि भारतीयैर्ज्यौतिषिकैः ? ग्रहाणां मन्दोच्चभगणाः शीघ्रोच्चभगणाश्च स्वरूपतः प्रतिपादनीयाः ।

3. सूर्यसिद्धान्तोक्ता ग्रहस्पष्टीकरणक्रिया संक्षेपेण विलिख्य विवेचनीया ।

4. किं नामायनचलम् ? तच्च सूर्यसिद्धान्तोक्तं कथमुपपद्यते, कुत चोप-युज्यते, कुतश्च वराहग्रहगुप्तल्लग्नपत्यादीनां सिद्धान्तेषु नोपलभ्यत इति विचार्यताम् ।

5. किं नाम लग्नम् ? तच्च सूर्यसिद्धान्तरीत्या साधितं साधु न वा ? किं चास्य प्रयोजनमिति च सप्रमाणं विविच्यताम् ।

6. सूर्यसिद्धान्तानुसारेण चन्द्रग्रहणसंभवः कथं ज्ञायते ? ज्ञाते च तत्सम्भवे तदारम्भावसानसमयौ कथमानीयेते इति सयुक्तिकं विशदीक्रियताम् ।

## EIGHTH PAPER

*Candidates are permitted to answer not more than THREE questions from EACH half*

*The questions are of equal value*

## FIRST HALF

*Examiner—MR. NARENDRAKUMAR MAZUMDAR, M.A.*

1. 'Although no formal spherical trigonometry is exhibited in any text, the early Hindu astronomers were obviously acquainted with principles that enabled them to solve spherical triangles.'

Give some formulas of spherical triangles on which early Hindu astronomical methods were based; determine the earliest dates when you come across such methods, and generally comment on the passage quoted above.

2. What do you understand by *ḍṛkṣepa*, *ḍṛggaṭā*, *ḍṛkkarma*, and *valana*? Explain their utility in Hindu astronomy.

3. What do you consider to be the difference between the dates of *Vedāṅga Jyotiṣa* and *Sūryyaprajñapti*? Give your basis and your calculations as accurately as the data permit. Comment on the opinions of modern scholars on the imperfections of such determination.

4. Fully explain the following passages from the *Vedāṅga Jyotiṣa* :—

जौ द्रा गः खे श्वे ही रो वाश् चि मूषण्यः सूमाधानः ।

रे मृ घा स्वा पो जः कृ प्यो ह ज्ये ष्ठा इत्युक्षा लिङ्गैः ॥

To whom does the credit belong for discovering the true import of this passage? What purpose does it serve in the construction of the Hindu calendar?

5. Explain the peculiar theory of two suns, two moons, and two sets of constellations, as found in the *Sūryyaprajñapti*, and the necessity for such a theory.

How are the three motions of the sun explained by such theory?

6. (a) Describe, according to Āryabhaṭa, the shape of the earth, and trace the description of such shape from earlier times.

(b) Give Āryabhaṭa's theory of 'diurnal rotation' of the earth. Who was the first person to propound such a theory?

(c) Give Āryabhaṭa's ideas about the polar regions and their inhabitants, and of the positions of Laṅkā, Ujjainī, Siddhapura, Yavakoti and Rome on the terrestrial sphere. Give reasons for your conclusions where necessary.

## SECOND HALF

*Examiner—MR. P. C. SENGUPTA, M.A.*

7. Give a short account of the luni-solar constants in the *Romaka Siddhānta* of the *Pañca-siddhāntikā*. In what respects was the transmitted Greek science modified by Āryabhaṭa's pupil Lāṭadeva?

8. Prove by the Hindu method Brahmagupta's rule that  $h$ , the sun's hour angle when he is on the prime vertical, is given by

$$R \cos h = \frac{R}{12 \tan \phi \times R \cos \delta} \times R \sin \delta \times 12,$$

where  $\phi$  is the latitude of the station and  $\delta$  the sun's declination.

Establish the above equation both by Menelaus's 'rule of six quantities' and by the modern rule.

9. Enunciate and explain, after Bhāskara II, the rule for finding the instantaneous daily motion of a planet affected by the equation of apsis only.

Trace the history of the solution of the problem from Āryabhaṭa I to Bhāskara II.

10. Establish, after Ptolemy, the following rules of his for finding the sun's declination and right ascension :—

$$(i) R \sin \delta = \frac{R \sin l \times R \sin w}{R},$$

$$(ii) R \sin AR = \frac{R \cos w \times R \times R \sin \delta}{R \sin w \times R \cos \delta},$$

where  $w$  is the obliquity of the ecliptic,  $l$  the sun's celestial longitude,  $\delta$  and  $AR$  his corresponding declination and right ascension.

Explain also the Hindu methods of arriving at the same or equivalent equations.

11. Establish by the Hindu method the following altazimuth equation :—

$$R \sin \delta = \frac{R \cos \phi}{R} \left( \frac{R \cos Z \times R \sin \phi}{R \cos \phi} - \frac{R \sin Z \times R \cos \alpha}{R} \right),$$

where  $\delta$  is the sun's declination,  $Z$  his zenith distance,  $\alpha$  his azimuth from the south, and  $\phi$  the latitude of the station.

12. Explain the following stanza from the Āryabhaṭīyam :—

उदयति हि चक्रपादश्चरदलहीनेन दिवसपादेन ।  
प्रथमोऽन्त्यश्चाथान्यौ तत्सहितेन क्रमोत्क्रमतः ॥

## GROUP VI

### (ANTHROPOLOGY)

#### FIFTH PAPER

*The questions are of equal value*

*Attempt only THREE questions from EACH half*

#### FIRST HALF

*Examiner*—MR. HARANCHANDRA CHAKLADAR, M.A.

1. Discuss the value of Averages of measurements of physical characters in racial ethnology.

2. Classify the white-skinned people of Asia, pointing out the distinguishing features of each variety.

3. Write an essay on the Pre-Dravidians in India.
4. What was the route followed by the Bantus in their expansion? How do they differ from the Sudanese Negroes in their physical features?
5. Describe the racial elements that have entered into the formation of the people of Melanesia.

## SECOND HALF

*Examiner*—DR. BIRAJASANKAR GUHA, M.A., PH.D.

1. Discuss the characters and antiquity of the Pekin Man. What fresh light does it throw on human evolution?
  2. What are the somatic traits of the Berbers? Discuss their relationship with the other races of North Africa.
  3. Discuss the racial affinities of the Grimaldi Race. Has it left any survivor in modern Europe? Discuss the physical characters of the people of the Plynlymon District of Wales in this connection.
  4. How far has the physical environment of Northern America shown convergence in its racial types? Discuss the theory of Prof. Franz Boas on the subject.
  5. Discuss the racial anthropology of the Spaniards.
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## GROUP VII

(ANTHROPOLOGY)

## SIXTH PAPER

## FIRST HALF

*Examiner*—RAI BAHADUR SARATCHANDRA RAY, M.A.

*Answer ANY THREE questions*

*The question are of equal value*

1. Write short notes on :—  
*Phratry; sex-totem; silent trade; intichiuma; rite de passage; bull-roarer; secret societies; Bachelors' House.*
2. Show how the study of genealogies may provide a clue to the social organisation of primitive peoples.
3. Discuss the status of woman in patriarchal and matriarchal societies respectively
4. Describe and give the distribution of different forms of polyandry; and discuss the relation of this form of marriage to infanticide and hypergamy.
5. Discuss the various theories of the origin and history of the institution of marriage.

## SECOND HALF

*Examiner*—MR. HARANCHANDRA CHAKLADAR, M.A.

*The questions are of equal value*

*Attempt only THREE questions*

1. Describe the influence of Animism on modern Hinduism. What is the difference between animism and animatism?
  2. Discuss the theories of Frazer and Durkheim with regard to the relation between magic and religion.
  3. Discuss the influence of religion on art and *vice versa*.
  4. Explain why women are shut out from religious rites in many parts of the world.
  5. Delineate the characteristics of Polynesian religion. Can you discover any points of agreement between Polynesian and Hindu cultures?
- 

## SEVENTH PAPER

## FIRST HALF

*Examiner*—RAI BAHADUR SARATCHANDRA RAY, M.A.

*Candidates are required to give their answers in their own words as far as practicable*

*Answer ANY THREE questions*

*All the questions are of equal value*

1. What are the essential differences between typical stone implements of the Lower, Middle, and Upper Palæolithic Epoch? Give their distribution.
2. Give an account of the Early Chalcolithic Indus Valley culture.
3. Write a short account of megaliths and their distribution. What light do Indian megaliths throw on the question of their origin?
4. Animals are often represented by pre-historic and recent backward people. Discuss the reasons, giving as many examples from India as you can.
5. Write notes on any four of the following :—
  - (1) Lake dwellings.
  - (2) Kitchen middens.
  - (3) Platform burials.
  - (4) Halstatt.
  - (5) La Teue.

## SECOND HALF

*Examiner*—DR. PANCHANAN MITRA, M.A., PH.D.

*The questions are of equal value*

*Attempt only THREE questions*

1. Give a short description of the different phases of Palæolithic culture with geological correlations.

2. Classify the Indian Neoliths and discuss the origins of agriculture and weaving in the old world.
3. Give a short sketch of the copper implements in pre-historic India, and sketch from Mohen-jo-Daro the early civilisation with the use of this metal.
4. What are the implements and rude stone monuments of the Early Iron Age in India?
5. Write short notes on the following :—  
Menhir, Mayer, Minoan.

## EIGHTH PAPER

## FIRST HALF

*Examiner*—MR. H. C. CHAKLADAR, M.A.

*Answer ANY THREE questions*

*All questions carry equal marks*

1. Give a short account of the head hunting practices of the Ao Nagas, indicating their possible motives and origin.
2. Analyse the religion of the Ao Nagas and show what part the worship of Nature and of ancestors played in it.
3. Give some examples of inter-tanda organisations amongst the Birhors.
4. How far would you consider the Birhor religion to be totemic in nature?
5. Write a short essay on the place of the peoples shown in Census Reports as 'animists' or 'followers of tribal religions' in the general Indian population.

## SECOND HALF

*Examiner*—DR. PANCHANAN MITRA, M.A., PH.D.

*The questions are of equal value*

*ANY THREE questions are to be attempted*

1. Arrange, with examples, some of the primitive tribes of India according to occupation, cultural level or physical characteristics.
2. How would you distinguish a caste from a tribe in India? How did castes originate?
3. Comparing the marriage rites of the Birhors with those of the Ao Nagas, and considering Bengalee analogies, what customs would you find to be continuous in distribution from Assam to Chhota Nagpur?
4. Give a short sketch of the religious beliefs of the Ao Nagas.
5. In your study of the material culture of the Birhors mention the traits which distinguish them from your own culture.



## M.A. EXAMINATION

## COMMERCE

## REALISTIC ECONOMICS

## FIRST PAPER

*The question are of equal value*

## FIRST HALF

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.*Answer ANY THREE questions*

1. How is a disturbance in the balance of payments between countries corrected in the case of (a) gold standard countries, and (b) countries that are on an inconvertible paper basis?

2. Give an account of Anti-Trust legislation in U.S.A. Why has the trust problem been more serious in America than elsewhere?

3. 'The joint-stock company is a form of organisation which is better adapted to obtain capital than to employ it effectively.' Critically examine the statement.

4. State and criticise the doctrine of purchasing power parity.

5. Discuss the functions and estimate the importance of the company promoter in the modern business world.

How far is it true to say that amalgamation and over-capitalisation of companies generally go together?

## SECOND HALF

*Examiner*—MR. P. C. GHOSH, M.A., B.Sc.*Answer ANY THREE questions*

1. Discuss the effect of prolonged borrowing operations on the course of foreign trade.

2. It is often alleged that dumping results in higher prices to domestic buyers. How far is this contention valid?

3. Examine the effect of protective import duties of the agriculture and manufactures of a country.

4. Analyse and illustrate the influence exerted by standardization of products upon the size of the business unit. How do you account for the survival of the small producer in the modern business world?

5. 'The cost of production which controls value relates to the whole process of production rather than to any particular parcel of products. Elucidate the statement, and indicate the principles, if any, which regulate the allocation of costs of marketing amongst the products of a business.'

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## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—MR. S. R. BATLIBOI, F.S.A.A.**THREE questions only to be attempted*

1. On 31st January, 1928, A owed B Rs. 500, for which B received two acceptances from A, one for Rs. 300, payable in two months, and one for Rs. 200, payable in four months. Each bill was dated 1st February, 1928. B discounted both these acceptances with his banker on 28th February, 1928, at 4 per cent.

Before the first bill became due, A applied to B for assistance in meeting the bill by providing Rs. 200 in cash. This B agreed to, on condition that a new acceptance at two months was given for the amount advanced plus 5 per cent.

A week before the second bill was due, A again applied to B for assistance, but B refused, and suggested that the bill should be renewed at two months, plus 5 per cent. This was done, but on 15th June, 1928, A became insolvent, leaving the bills, not yet due, unpaid. On 31st August, 1928, his Official Receiver paid a first and final dividend of ten annas in the rupee. Make the entries in B's books necessary to record these transactions.

2. Bhagat & Roy, Film Hirers, enter into an agreement with the Universal Cinema Co., Ltd., to take charge of the Company's Picture Palace and be entirely responsible for the management of the place for six months from 1st January, 1932.

The agreement provides that (1) Bhagat & Roy shall bear the expenses of providing the films and defray the cost of advertising; (2) the Cinema Company be allowed out of revenue a sum of Rs. 10 a week to cover the amount of depreciation of fixtures; (3) repairs and renewals be paid out of revenue, except that structural alterations and repairs to the freehold be charged to the Cinema Company; (4) all receipts and payments be made through a bank account in the joint names of Bhagat & Roy and the Cinema Company, and bank interest be credited to revenue; (5) profits and losses be divided in the proportions of 75% to Bhagat & Roy and 25% to the Cinema Company and that revenue account be prepared at the end of six months.

*The Receipts and Payments were as follows :—*

	Rs. A. P.		Rs. A. P.
Bank Interest ...	60 0 0	Gate money received ...	10,000 0 0
Wages ...	2,300 0 0	Films ...	2,500 0 0
Advertising ...	750 0 0	Rates and Taxes ...	1,500 0 0
Sundry Repairs ...	250 0 0	Repairs to the Freehold ...	800 0 0
General Expenses ...	1,250 0 0		

Draft the necessary accounts in accordance with the above terms, and show how much is receivable by each party to the agreement.

3. The following balances are extracted from the books of the O.K. Life Assurance Company, Limited, as at 31st December, 1931. Prepare a Revenue Account for the year 1931 in the prescribed form :—

Rs		Rs	
Life Assurance Fund		Commission ...	2,18,500
on 1st Jany., 1931 ...	63,31,450	Rent ...	2,860
Claims by death ...	63,31,000	Income Tax on interest	
Claims by maturity ...	2,18,000	and Dividends ...	5,745
Premiums ...	20,66,000	Law Charges ...	205
Bonus in reduction of		Advertising ...	4,340
Premiums ...	1,025	Printing and Stationary ...	13,935
Agents' and Canvassers'		Postage and Telegrams ...	14,325
allowances ...	26,400	Receipts Stamps ...	2,390
Salaries ...	44,220	Bank Charges ...	1,500
Travelling Expenses ...	1,260	General Charges ...	2080
Directors' fees ...	8,740	Surrenders ...	47,600
Auditor's fees ...	1,000	Re-Assurance Premium ...	40,965
Medical fees ...	52,320	Assignment Fees ...	545
Interest and Dividends	2,75,600	Endorsement Fees ...	695
Policy Renewal Fees	9,630	Transfer Fees ...	1,450

Provide Rs. 1,200 for depreciation on furniture and Rs. 2,00,000 for depreciation of investments.

4. A Joint-stock Company, having its Head Office at Benares, has branches at Allahabad and Simla. The following are the Trial Balances as on 31st December, 1930 :—

*Benares Trial Balance*

	Rs.
Capital ...	2,00,000
Stock on 31st December, 1930 ...	1,20,000
Unclaimed dividends ...	1,000
Debtors ...	40,000
Creditors ...	11,000
Cash at Bank ...	42,800
Profit and Loss Account Cr. balance ...	26,600
Calls in arrears ...	10,000
Allahabad Current Account Cr. balance (after debiting Rs. 1,000 for goods sent on 30th December, 1930, but received at Allahabad on 3rd January, 1931) ...	1,400
Simla Current Account Dr. balance (after debiting Rs. 1,400 for cash sent on 29th December, 1930, but received at Simla on 2nd Jany., 1931) ...	27,200

*Allahabad Trial Balance*

	Rs.
Stock on 31st December, 1930 ...	5,800
Debtors ...	3,800
Creditors ...	3,400
Cash in hand ...	600
Simla Current Account Cr. balance ...	8,600
Benares Current Account Dr. balance (after crediting with Rs. 600 received from a shareholder in Allahabad against his calls in arrear in November, 1930, not intimated to the Benares Office till 1st January, 1931) ...	1,800

*Simla Trial Balance*

	Rs.
Stock on 31st December, 1930	14,400
Debtors	3,400
Creditors	2,400
Cash	1,600
Allahabad Current Account Dr. balance	8,600
Benaras Current Account Cr. balance (after debiting for Rs 200 paid on unclaimed dividend warrants to Simla shareholders in October, 1930, not intimated to Benaras Office till 1st January, 1931)	25,600

Pass the necessary adjusting entries in the Head Office Journal for reconciling the Current Accounts with Allahabad and Simla and for taking into account the money received on calls in arrears, and moneys paid on unclaimed dividends.

Prepare also a combine Balance Sheet of the Company on 31st December, 1930.

5. A, B, and C were in partnership, sharing profits in the proportion of five, four, and three. The Balance Sheet of the firm, as on 31st March, 1932, was as under :—

	Rs.		Rs.
Capital Accounts :—		Goodwill	4,000
A	13,590	Fixtures	820
B	9,512	Stock	15,730
C	6,117	Sundry Debtors	9,350
Sundry Creditors	4,169	Cash	3,491
	<u>33,391</u>		<u>33,391</u>

A had been suffering from ill-health and gave notice that he wished to retire. A dissolution agreement was, therefore, entered into, as on 31st March, 1932, the terms of which were as follows :—

(a) The Profit and Loss Account for the year ended 31st March, 1932, which showed a net profit of Rs. 4,800 was to be re-opened. B was to be credited with Rs. 400 as bonus, in consideration of the extra work which had devolved upon him during the year. The profit-sharing basis was to be revised, as from 1st April, 1931, as follows : A 3, B 4, and C 4.

(b) Goodwill was to be valued at two years' purchase of the average profits of the preceding five years. The Fixtures were to be revalued by an independent valuer. A Reserve of 2% was to be made for doubtful debts and the remaining assets were to be taken at their book values.

The valuations arising out of the above agreement were : Goodwill Rs. 5,680 and Fixtures Rs. 1,098.

B and C agreed, as between themselves, to continue the business, sharing profits in the ratio of four and three, and decided to eliminate Goodwill from the Balance Sheet, to retain the Fixtures on the books at the revised value, and to increase the Reserve for Doubtful Debts to 6%.

You are required to submit the entries necessary to give effect to the above arrangements and to prepare the Balance Sheet of B and C immediately following the retirement of A.

## SECOND HALF

*Examiner*—MR. RANJIT ROY, M.A., A.C.A., F.E.S.

*Not more than THREE questions to be attempted*

1. A cloth mill in Delhi sends regular consignments of cloth to Messrs. Bunsidhar & Co., of Calcutta, who are agents for selling cloth at the risk of the Delhi mill. Record the following transactions in the ledger accounts, showing the profit made on the Calcutta consignment and the balance due by the agents, after allowing them commission at the rate of three pies per every pound of cloth sold by them. The total quantity of cloth consigned was 2,56,000 lbs. at cost which amounted to eleven annas per pound. The total quantity of cloth sold was 1,92,999 lbs. at fifteen annas a pound. The total remittance by the agents was Rs. 1,55,000, and the railway freight paid by the agents was Rs. 16,000. The balance of cloth to be valued at cost price plus the freight.

2. X and Y were in partnership, sharing profit and losses three-fifths and two-fifths respectively. The books of the firm are kept by single entry and the balance sheet on the 31st Dec., 1930, was as follows :—

	Rs. A. P.		Rs. A. P.
Capital Accounts :—		Land and Building	3,250 0 0
X ...	3 000 0	Plant and Fixtures	1,462 0 0
Y ...	2,000 0	Stock ...	2,118 14 0
Creditors	4,678 9	Debtors ...	6,418 5 3
Loans ..	3,000 0	Bills Receivable	186 7 6
Bank Overdraft	762 4	Cash in hand	5 3 6
	13,440 14 3		13,440 14 3

Upon examining the books it is found that X had drawn Rs. 750 on account of profits and Y Rs. 500 during the year ended 31st Dec., 1931, and that Rs. 375 had been paid for new plant on the 30th Sept., 1931. It is also found that on the 31st Dec., 1931, the debtors amounted to Rs. 5,617-2-3 and the creditors to Rs. 2,615-14-8, that the loans had been reduced by Rs. 1,000 and that there was a balance of Rs. 198-10 at the bank, and cash in hand was Rs. 6-9-7. There were no bills receivable but bills payable amounted to Rs. 200. The stock in hand on the 31st Dec., 1931, was valued at Rs. 3,112-10-8. The partners agree that 10 per cent should be written off Plant and Fixtures as representing depreciation, and that 5 per cent. interest on Capital (but not drawings) should be charged before dividing the balance in the agreed proportions. You are required to prepare a statement, showing the profit made in the year ended 31st Dec., 1931, and a balance sheet as on that date.

3. Jogen, Bimal, and Sadhu were in partnership, sharing profits and losses as 8, 5, and 3 respectively. The capital accounts were fixed under the partnership agreement, and as the result of several consecutive years' losses the firm's Balance Sheet on the 31st Dec., 1931 was as under :—

	Rs.		Rs.
Capital Accounts :—		Current Accounts :—	
Jogen ...	5,000	Jogen ...	2,195
Bimal ...	2,000	Bimal ...	1,793
Sadhu ...	1,000	Sadhu ...	1,520
Sundry Creditors	2,953	Plant and Machinery	1,050
Bank Loan ...	5,500	Stock in Trade ...	6 059
		Sundry Debtors	3,572
		Cash in Hand ...	324
	16,453		16,453

It was resolved to dissolve the partnership as on this date, and shortly afterwards Sudhu was adjudicated insolvent and could contribute nothing towards his deficiency in the firm. The firm's assets were realised as follows: Plant and Machinery Rs. 600; Stock in Trade Rs. 5,230, Sundry debtors Rs. 3,555

You are requested to close the books of the firm.

4 The Gwalior Cotton Mills, Ltd., was started with a nominal capital of one crore divided into 50,000 ordinary shares of Rs. 100 each and 50,000 7% cumulative preference shares of Rs. 100 each. Out of these shares, 34,000 ordinary and 17,000 preference shares were taken up and the amount of Rs. 100 in all was called upon each share. A sum of Rs. 12,59,655, however, remained unpaid as at the 31st March, 1932, on allotment and calls from several shareholders and the secretary of the company. During the year the company issued debentures (secured on the land, buildings, and machinery) of the nominal value of Rs. 12,00,000, out of which Rs. 8,00,000 were taken up and Rs. 4,00,000 was paid to the company as a loan on the security of the debentures.

Out of the sundry creditors of Rs. 17,62,612, Rs. 14,977 were due to merchants on account of stores supplied and Rs. 62,838 on account of wages, etc. Rs. 1,36,580 due to the Union Bank of India on account of overdraft against the security of the investments and Rs. 5,93,680 due to the Hindustan Bank, Ltd., on account of Cash Credit secured on the hypothecation of stock. The preference dividend amounting to Rs. 1,66,600 was not paid as the mills made a loss.

The following are the further ledger balances of the company as at 31st March, 1932 :—

	Rs.
Sundry Creditors ... ..	17,62,612
Land and Building (cost Rs. 28,23,064) ... ..	26,23,064
Plant and Machinery (cost Rs. 32,68,081) ... ..	24,88,719
Bank Debts ... ..	65,511
Unexpired Insurance ... ..	7,063
Investments 6% bonds (of the nominal value of Rs. 2,05,000 at cost) ... ..	2,05,062
Profit and Loss Account (debit) ... ..	99,339
Cash with Bank and in hand ... ..	42,740
Stores and spare gear at cost ... ..	90,560
Stock in Trade at cost ... ..	11,78,616
Furniture ... ..	2,263

From the above particulars prepare a Balance Sheet in proper form.

5. The balances of the Indian National Bank, Ltd, as on the 31st Dec., 1931, stood as follows :—

	Rs.
Paid up Capital ... ..	10,00,000
Local Bills discounted ... ..	9,00,060
Reserve Fund ... ..	3,85,000
Cash Credits and Overdrafts ... ..	14,00,000
Unclaimed dividends ... ..	5,000
Loans ... ..	23,00,000
Current Savings deposits ... ..	25,00,000
Furniture ... ..	20,000
Fixed Deposits ... ..	20,00,000
Stamps and Stationary ... ..	5,000
Cash in Hand ... ..	2,50,000
Cash at Banks ... ..	6,50,000
Investments at cost ... ..	4,75,000
Profit and Loss Account ... ..	1,10,000

Out of the total debts, debts for Rs. 2,85,000 were considered doubtful and the balance was considered good. Out of the good debts, debts amounting to Rs. 24,00,000 were fully secured, and for debts amounting to Rs. 4,00,000 (including Rs. 1,15,000 due by a director) the Bank held personal securities of one or more over and above the personal security of the debtors, and for the balance the Bank held no other security than the personal security of the debtors.

The directors require the Bank's investments to be shown in the Balance Sheet at market value on the 31st Dec., 1931, which is Rs. 5,25,000.

Prepare the Balance Sheet of the Bank as on the 31st Dec., 1931, in the form prescribed under the Indian Companies Act.

### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

*Examiner—DR. R. B. PAL, M.A., D.L.*

*Not more than THREE questions to be attempted*

1. Define 'consideration', and examine how far consideration is a necessary element of a binding contract.

The commissioners of a municipality created themselves by deed trustees for the purpose of building a town hall and inviting and collecting subscriptions for that purpose. The defendant promised to subscribe to this fund the sum of Rs. 100 having signed his name in the subscription book for that amount. Afterwards, the commissioners entered into a contract with a contractor for the purpose of building the town hall. The defendant subsequently not having paid the promised subscription, the commissioners want to bring a suit against him for the realisation of the amount. Discuss how far the defendant will be liable.

2. Sec. 28 of the Indian Contract Act lays down : 'Every agreement by which any party thereto is restricted absolutely from enforcing his right under, or in respect of, any contract by the usual legal proceedings in the ordinary tribunals, or which limit the time within which he may thus enforce his right, is void to that extent.'

A clause in a policy of fire insurance provides that if the claim is made and rejected and an action or suit be not commenced within three months after such rejection, all benefits under this policy shall be forfeited.

Examine, with reference to the above provision of the Indian Contract Act, how far this clause is enforceable.

3. A joint Hindu family consists of two brothers and a sister, all the three persons being minors. The elder of the two minor brothers borrows money to provide for the expenses of the sister's marriage.

Discuss how far the creditor will be entitled to be reimbursed.

4. A property was sold under the decree of the landlords for arrears of rent. J, claiming to have a share in the property sold, applied for permission of the executing Court to deposit the decretal amount and compensation for setting aside the sale. The Court having given the permission, he deposited the amount and got the sale set aside. He then brought a suit for contribution against N, the judgment debtor. N appeared and proved that J had no interest in the property sold. Discuss if J is entitled to be reimbursed.

5. Examine how far the supervening impossibility will excuse performance of a contract

6. Explain the principle laid down in—

*Hadley v. Baxendale,*

or,

*Ertelbieber & Co. v. Rio Tinto Co., Ltd.*

## SECOND HALF

Examiner—N. C. CHATTERJEE, B.A., B.L., BARRISTER-AT-LAW

*Not more than THREE questions to be attempted*

1. Write a short essay on any one of the following subjects :—

- (i) Carrier's liability.
- (ii) Effect of insolvency on antecedent transactions.
- (iii) Infant's contract.

2. Examine Agent's liability under a contract.

3. Write a short note on the law of warranty on a sale of goods.

4. Notice the distinction between a 'Banker's Cheque' and a 'Bill of Exchange'.

5. A promissory note ran as follows :—

'On demand we, the undersigned, Ali Hashim Meter and guardian Fatima Bibi, do hereby promise to pay to K and M or order the sum of Rs. 20,000 with interest at Re. 1 per cent. per mensem', and it was signed as follows : Fatima Bibi, guardian of Ali Hashim Meter.

Examine whether Fatima Bibi made herself liable under the note.

6. State the circumstances in which a company may be wound up voluntarily and the consequences of such voluntary winding up

## FOURTH PAPER

*The questions are of equal value*

*Only THREE questions need be answered from EACH half*

## FIRST HALF

Examiner—DR. B. R. RAU, M.A., PH.D.

1. Discuss the *modus operandi* of the bank rate on the price level and the rates of saving and investment.

2. State briefly the opinion of the currency and banking schools. Indicate clearly the weaknesses of each. If you are asked to regulate the note-issue of the Central Reserve Bank of this country, which method will you adopt, and why?

3. Discuss the modern conception of the theory of credit control. Can India count on a managed credit system to solve its monetary evils?

4. Discuss the rationale of banking regulation, and outline a scheme suitable for our stage of banking development

5. Describe the circumstances which led to the amalgamation of the Presidency Banks. To what extent does the Imperial Bank of India serve as a Central Bank for the country?



## SECOND HALF

*Examiner*—DR. B. B. DASGUPTA, M.A., PH.D.

1. Describe the procedure adopted by a bank if a bill of exchange is dishonoured. What is the legal position of the holder of such a bill?

2. State and discuss the principal factors which affect the rates of Foreign Exchanges.

Show how the rates of Foreign Exchanges are of special significance in the Indian monetary system.

3. Explain the risks which a banker runs in opening and conducting an account in the name of (a) a minor and (b) a lunatic.

4. A bill is drawn in London, payable in Calcutta three months after date. Enumerate the various circumstances which will affect its price if negotiated in London on the day of its issue.

5. Discuss the place of indigenous bankers in the banking system of India.

## INDUSTRIAL STRUCTURE AND DEVELOPMENT

*The questions are of equal value*

## FIRST HALF

*Examiner*—PROF. P. N. BANERJEA, M.A., D.Sc., BARRISTER-AT-LAW

*Answer ANY THREE questions*

1. Trace the evolution of the capitalistic system of industries in Great Britain.

2. Indicate, in brief, the causes that are leading to amalgamation and consolidation in the British steel and cotton industries.

3. Discuss the factors that have prevented the growth of mass production in France. Can India derive any lessons from the industrial life of France regarding her future industrial policy?

4. What are the merits and drawbacks of the managing agency system? Illustrate your answer from some representative industries in India.

5. What are the measures which France adopted for the development of her mercantile marine and her ship-building industry? How far should India adopt those measures for her ship-building industry?

## SECOND HALF

*Examiner*—DR. R. M. CHAUDHURI, M.A., PH.D.

*Answer ANY THREE questions*

6. Mention the chief characteristics of Indian factory labour. Would you advocate the continuance of the connection of Indian factory labour with agriculture?

7. Trace the growth of the Indian steel industry. What are the comparative advantages possessed by this industry? On what grounds, and with what success, has fiscal protection been granted to this industry?

8. Give a brief survey of the present position of the salt industry in India. Can this industry be started in Bengal?

9. Indicate the nature of difficulties experienced by Indian industrialists in financing industrial enterprises in India. How can these difficulties be remedied?

10. Indicate the reasons that have led to short-time working in the jute mills of Bengal. Should the State intervene in the case of a failure to arrive at an agreement among mills as regards short-time working?

### (BUSINESS ORGANISATION)

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

#### FIRST HALF

*Examiner—MR. G. BASU, B.A., A.S.A.*

1. Describe the internal organisation of a modern Commercial Bank.

2. (a) In Marine Insurances, what is meant by Actual Total Loss and Constructive Total Loss? Explain with examples.

(b) On an Accident Insurance Policy which is determined by the company the refund to the insured is pro rata, but on one which is determined by the insured the refund is less than pro rata. Explain clearly why this is so.

3. (a) Explain the characteristics of modern organised markets.

(b) Show how modern organisation tends so to distribute the risks inherent in making and marketing that they fall increasingly on the shoulders best fitted to bear them.

4. Write short notes on the following :—

(a) 'A Balance Sheet is a flash-light photograph recording the position of a business at a given moment.'

(b) 'To some extent "window-dressing" may not be at all a bad thing in itself.'

5. Describe fully a Profit-sharing Scheme which attempts to divide most equitably between Capital and Labour the fruits of their joint efforts.

#### SECOND HALF

*Examiner—MR. P. C. MAHANTI, B.A. (CAL.), B.Sc. (CANTAB.)*

1. Describe the uses and abuses of the Managing Agency system obtaining in India.

2. Describe what, in your opinion, would be the best method of organising a bus syndicate in Calcutta.

3. Critically analyse the following statement : 'The various forms of business organisation are children whose father is economic expediency and whose mother is the law.'

4. Compare trusts with holding companies, with special reference to the point of view of the investing public.

5. Give short notes on (1) Arbitrage operations, (2) Negotiable instruments, (3) Bull and bear transactions, (4) Bills of lading, (5) Stoppage in transitu, and (6) Warrant.

## (TRANSPORT)

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. N. SANYAL, M.A., PH.D.*Answer ANY THREE of the following*

1. 'The cheaper the line the heavier will be the charge on traffic for the use of the capital employed in its construction.' (Acworth.)

Critically examine the above statement.

2. 'Railway cost increases absolutely as traffic increases but increases at a much slower ratio.' (Acworth.)

Explain fully the above with reference to each class of railway expenditure.

3. Discuss the fundamental principles on which the rates and fares for transport services generally are based.

4. State your views on road development in India with a brief account of what the Government is now doing in the matter. Indicate how a co-ordination of road and railway services may be ensured in this country.

5. Write notes on *any four* of the following :—

(a) Variable and Non-variable expenditure.

(b) Hump Yard.

(c) Train Control.

(d) Wagon Pool.

(e) Net Ton-mile per Goods Train-mile.

## SECOND HALF

*Examiner*—MR. H. D. GHOSH, M.A.*Answer ANY THREE of the following*

1. Discuss the views of the majority and minority groups of the Acworth Committee on the future management and ownership of Indian railways.

2. Trace briefly the development of goods classifications on Indian railways (between 1884 and 1916), with special reference to the policy of the State.

3. Discuss the uses of railway statistics, and state how far they can be relied on for practical working. What key statistics will you require in estimating operating efficiency in a Railway Division?

4. Explain what you understand by 'Equal Mileage' and 'Telescopic' rates, as also 'Class rates' and 'Adjusted class rates.' Illustrate your answers from the practice prevalent on Indian railways.

5. Describe how shipment coal moves from the collieries of Jherria field to the port of Calcutta. State the various arrangements provided by the East Indian and Bengal Nagpore Railways in this connection.

## (COMMERCIAL GEOGRAPHY)

*The questions are of equal value**Answer ANY THREE questions from EACH half*

## FIRST HALF

*Examiner—DR. H. SINHA, M.Sc., Ph.D.*

1. What are the factors which govern the entrepôt trade of country? Discuss the present position of London in this connection.
2. Compare the chief Mediterranean and Atlantic ports of Europe, pointing out their special advantages and disadvantages, if any.
3. Locate, and estimate the importance of, the various forest areas in South America.
4. Contrast briefly the distribution of coal areas in Great Britain and in France, and explain the economic significance of the differences.
5. Describe, with a sketch-map, the general limits of cotton-growing in the United States of America and the particular areas of very heavy production.

## SECOND HALF

*Examiner—MR. M. K. GHOSH, M.A., B.COM.*

1. Draw a sketch-map of South India, showing how lack of communications has retarded its development.
2. Discuss fully the present position and future possibilities of the sugar industry in India.
3. Locate, and estimate the importance of, the mineral resources of India.
4. Write a short essay on the irregular distribution of population in India.
5. Discuss how far it is practicable in India to arrest the fall in the prices of jute, rice, and tea, by a scheme of 'Restriction.'

## (AGRICULTURAL ECONOMICS)

*The questions are of equal value**Answer THREE questions from EACH half*

## FIRST HALF

*Examiner—PROF. S. C. ROY, M.A.*

1. Discuss the effect of present low prices of produce on the indebtedness of peasants, specially in Bengal.
2. The Royal Commission on Agriculture says on co-operation: 'As a rule we consider that Government should spend money rather on education than audit. The audit of healthy societies is not a proper charge on the Public Funds.' Discuss.
3. Discuss the importance of marketing of agricultural produce to the cultivator. Describe its present position in India and offer suggestions for improvement.
4. Discuss the problem of credit to the farmer in general.  
How would you organise credit for the farmer in Bengal?
5. What are the essentials of Large Scale agriculture? What impediments are there to that in Bengal?

## SECOND HALF

*Examiner*—RAI BAHADUR BIJAYBIHARI MUKHERJEE, M.A.

1. Indicate clearly the relative importance of each of the factors of agricultural production. Does the Law of Diminishing Returns apply equally to all these factors?

2. What were the objects and reasons of the legislation undertaken for the relief of Deccan agriculturists?

What are the causes of the failure of this measure as well as of the Usurious Loans Act?

3. Discuss fully the question of one-crop *versus* diversified agriculture.

4. Discuss, with reference to the social and economic conditions of Bengal, the proposition that the rural population of to-day determines very largely the character of the nation to-morrow.

5. Discuss the importance of the Irrigation problem in Bengal and the nature of its complexities.

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## (PUBLIC FINANCE)

*The questions are of equal value*

## FIRST HALF

*Examiner*—PROF. P. N. BANERJEA, M.A., D.Sc., BARRISTER-AT-LAW

*Answer ANY THREE questions*

1. Describe the main features of the British income tax, and contrast the Indian income tax with the British as regards their scope and methods of administration.

2. Examine the nature of the real burden of a public debt. Do you consider the Indian public debt to be a 'mere trifle'?

3. Discuss the chief disadvantages of currency inflation as a method of taxation.

4. State the main features of the 'famine taxes' introduced in India in 1877-78. Discuss the existing financial arrangements for famine relief in this country.

5. Discuss the principles which should regulate the imposition of excise duties.

'In general, excises as taxes on expenditure or consumption are unfair.' Do you agree with this view? State reasons for your answer.

## SECOND HALF

*Examiner*—DR. J. P. NIYOGI, M.A., PH.D.

*Answer ANY THREE questions*

1. 'Generally it may be said that any single test of ability to pay, whether it be amount of income, or of capital, of savings, or of expenditure or anything else, is bound to have many defects.' Elucidate this statement, and examine the desirability of a multiple tax system in a modern country.

2. Describe the main features of the Excess Profits Duty as levied in India after the European War. Compare the Excess Profits Duty of India with that of Great Britain.

3. Briefly describe the functions of the Auditor-General in India. By what means has his position been rendered independent of the executive authorities.

4. Describe the main sources of revenue of the local bodies in Bengal.

5. Give an account of the chief sources of provincial revenue in India.

Is it desirable and necessary to give the provincial governments additional resources? If so, point out how this can be done.

### (ECONOMIC HISTORY)

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. BEJOY K. SARKAR, A.B.

*Answer ANY THREE questions*

1. Describe, in general outline, the history of the Labour Movement in England.

2. Discuss the effects of the French Revolution on the economic conditions in France and Germany.

3. Describe the economic position of Japan as a result of the World War.

4. Give a brief account of the steps taken by the Government to foster the development of Indian industries since the commencement of the European War. Do you consider these steps to be adequate for the purpose?

5. Trace briefly the development of the cotton mill industry of India.

#### SECOND HALF

*Examiner*—DR. R. M. CHAUDHURI, M.A., PH.D.

*Answer ANY THREE questions*

1. What were the chief features of the Industrial Revolution in Great Britain? Discuss briefly its economic and social effects.

2. Indicate the causes that led to the suspension of cash payments by the Bank of England in 1797.

3. Trace the rise of the free trade movement in Great Britain. What are the factors that have given rise to a demand for protection in recent years?

4. Examine critically the financial arrangements under which Indian railways have been constructed.

5. Give an idea of the various discriminating measures adopted by Government in India during the first half of the nineteenth century to promote British trade in India.

## (AUDITING)

*Answer only THREE questions from EACH half**The questions are of equal value*

## FIRST HALF

*Examiner—MR. S. N. MUKHERJEE, F.S.A.A.*

1. What steps would you take (a) in vouching a Purchase Journal; (b) in vouching the debit side of a Cash Book?

2. How would you verify the following assets of an Insurance Company?—

- (i) Loans against Policies within their Surrender Values;
- (ii) Stock Exchange Securities;
- (iii) Deposit with the Controller of Currency;
- (iv) Loans against Life Interests and Reversions;
- (v) Other Book Debts.

How would you certify a Balance Sheet of such a concern, and, particularly, one on the eve of a valuation?

3. Under a Manager's Service Agreement, you, as Auditor, have to certify the amount of commission due to him in accordance with a clause which provides *inter alia*, that the commission shall be 5% of the net Trading Profits. A summary of the Profit and Loss Account is as follows :—

	Rs.		Rs.
To General Expenses	5,750	By Balance from Trading A/c	12,060
„ Income Tax ...	1,400	„ War Loan Interest ...	250
„ Interests on Capital ...	500	„ Discount ...	250
„ Depreciation ...	200		
„ Sinking Fund ...	50		
„ Royalties ...	300		
„ Net Profit ...	4,300		
	<hr/> 12,500 <hr/>		<hr/> 12,500 <hr/>

- (i) Draft your Certificate.

- (ii) Give your reasons supporting the amount due.

4. You are required to set out the steps you would, as Auditor, take in order to satisfy yourself that :—

- (i) Stock had not been over-valued.

- (ii) Trade liabilities had not been understated.

5. A private limited company has paid uniform dividends of 8 per cent. yearly, whether the actual profits justified the payment or not. The directors explained the action by stating that the valuations of the building and plant were so much below their real value and that they were justified in paying the dividend, and all the shareholders agreed. You are called in to advise. What suggestion do you propose to make?

The Auditor sent in a written protest to the directors, but signed the accounts. In the above circumstances, has he any responsibility for the dividend paid beyond the amount actually earned, and, if so, to what extent?

## SECOND HALF

*Examiner—MR. N. K. MAJUMDAR, M.A.*

6. If, as Auditor, you are consulted by the Directors of a Limited Company on the question of the payment of an interim dividend, what would you advise? Who is responsible for declaring such dividend?

7. What duties are imposed upon an Auditor in respect of—

- (i) the form in which the accounts are presented to the shareholders ;
- (ii) audit of the Statutory Report of a Public Limited Company ;
- (iii) a bank audit ?

8. Express your opinion on the following report of the auditors of a Limited Company, quoting relevant cases within your knowledge :—

'We have audited the Balance Sheet of the Madras Cotton Manufacturing Co., Ltd., above set forth, with the books of the Company, in which have been incorporated the returns from the Branches certified by the Branch Manager, and have obtained all the information and explanations we have required. The figure of stock amounting to Rs. 18,45,200 has been taken as supplied to us by the Managing Director. The allocation between capital and revenue expenditure is done by the Mill Manager at Madras and has been taken by us as correct. The value of the investments, as shown above, amounting to Rs. 3,50,000, is dependent upon realisation. Subject to the above remarks, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us and as shown by the books of the Company.'

9. In what circumstances may a Company pay interest on Capital otherwise than out of profits ?

10. What are the principal points to be borne in mind when conducting an investigation on behalf of a client who contemplates buying a business ?

#### (CURRENCY)

*The questions are of equal value*

#### FIRST HALF

*Examiner—DR. H. SINHA, M.Sc., Ph.D.*

*Answer ANY THREE questions*

1. How does the gold standard work normally, and what is implied by its suspension ?
2. What, in your opinion, are the root causes of the present slump in prices, and how far would a policy of inflation correct the state of affairs ?
3. Discuss the economic utility of a properly constructed index of commodity prices and security prices.
4. In what respects do you consider the existing currency system of India unsatisfactory ?
5. Should the issue and control of currency be entrusted to a Central Bank or to the State ?

#### SECOND HALF

*Examiner—DR. B. B. DASGUPTA, M.A., Ph.D.*

*Answer ANY THREE questions*

1. Discuss critically the following criteria for the regulation of currency :—
  - (a) The Reserve of the Central Bank ;
  - (b) Wholesale Price Index ;
  - (c) Level of Employment ;
  - (d) Index of Wages.
2. Give an account of the mechanism of dealing in forward exchange. What are the forces that determine the difference between the spot and forward prices of foreign currencies ?
3. What are the objections raised by the Hilton Young Commission against the adoption of the sterling exchange standard in India ? How far were they valid when the rupee was linked to sterling in September, 1931 ?



4. Between September, 1931, and the end of January, 1932, India exported gold to the amount exceeding £ 30 million. Examine the nature and significance of this export, and consider its effect on India, on England, and the rest of the world.

5. Trace briefly the history of the Paper Currency system of India.

(STATISTICS)

*The questions are of equal value*

FIRST HALF

Examiner—DR. H. SINHA, M.Sc., PH.D.

*Only THREE questions to be attempted*

1. Statistics may be called the 'Science of Counting'. Criticize the above definition, and discuss the points of distinction between Statistics and Arithmetic. How would you estimate the relative usefulness of statistics and accounting in commerce? Give illustrative examples.

2. 'The value of averages as a statistical tool depends entirely upon the discrimination with which they are used and interpreted.'

Elucidate the above statement, giving examples of the use of the averages in handling business data.

3. Analyse critically the *advantages* and *disadvantages* of the methods of *standard deviation* and *quartile deviation* in their application to business statistics.

4. Explain the construction and uses of a logarithmic histogram. What are the defects of the absolute histogram as compared with the logarithmic histogram, and how can they be remedied?

5. What do you understand by interpolation? What are its uses? Give some examples, illustrating its practical importance.

SECOND HALF

Examiner—DR. S. M. GANGULY, M.A., D.Sc.

*Only THREE questions to be attempted*

1. Explain what is meant by a *weighted mean* and discuss the effect of weighting.

Calculate (i) the *unweighted* mean of the prices in column III, and (ii) the mean obtained by weighting each price by the quantity of article consumed, and explain why they differ as they do:—

I	II	III
Articles of food	Quantity consumed	Price (annas per seer)
Rice	5.4 md.	2.3
Dal	1.7 „	1.5
Sugar	25 „	5.8
Oil	.36 „	7.2

2. Define 'Standard Deviation,' 'Quartile,' and 'Skewness.'

Prove that the mean squared deviation is least when the deviations are measured from the mean.

3. Given :—

Age	No. of deaths in a year per thousand.
15-25	110
25-35	170
35-45	390
45-55	720

Find the number of deaths corresponding to age groups 20-30 and 40-50.

4. The 'index prices' of meat and sugar for the period 1924-30 are given below. (The price in 1913 is taken as 100 in each case.)

Draw the two graphs on the same axes. At what periods was the percentage rise in each the same ?—

Year	...	1924	1925	1926	1927	1928	1929	1930
Sugar	...	300	432	162	152	203	197	157
Meat	...	214	264	220	185	161	159	163

5. Define the 'coefficient of correlation' and 'lines of regression.'

Compute the *coefficient of correlation* between the age and income from the following data :—

Weekly income.	15-20 years.	20-25 years.	25-30 years.	30-35 years.	35-40 years.	Total cases.
Rs. 2 to Rs. 4	1	1	1	0	0	3
Rs. 4 to Rs. 6	5	15	8	7	5	40
Rs. 6 to Rs. 8	3	14	14	14	9	54
Rs. 8 to Rs. 10	0	0	0	1	2	3
Total cases	9	30	23	22	16	100

Average Age	...	27.75	S.D.	6.0
„ Income	...	Rs. 6.12	S.D.	1.21

## MENTAL AND MORAL PHILOSOPHY

## FIRST PAPER

*Examiner*—MR. J. R. BANERJEA, M.A., B.L.*The questions are of equal value*

## FIRST HALF

(HISTORY OF ANCIENT AND MEDIÆVAL EUROPEAN PHILOSOPHY)

*Attempt ANY THREE questions*

1. Discuss the question of the place of Anaximander in the history of Greek philosophy. State and examine his doctrines. In what does his distinction as a thinker lie?

*Or,*

In what respect in the Pythagorean position an advance on that of the Ionic philosophers? What did the Pythagoreans mean by stating that Number is the essence of all things? Explain and examine the following views of the Pythagoreans :—

- (a) Each thing consists both of the limiting and the unlimited.
- (b) The *monads* and the *adristos duads* are the elements of number.

2. State and examine Zeno's arguments against the reality of motion, the existence of the manifold, the reality of space, and the veracity of sensuous perception.

*Or,*

What are the points of contrast between the philosophy of Heraclitus and that of the Eleatic school? Was he a hylozoist? Discuss. It has been said that in his utterances is to be found the embryo of the solution of the enigma of the universe. Discuss this fully. State his ethical doctrine.

3. What are the points of interest in the Atomic philosophy? In what respects does the system of Anaxagoras stand opposed to the Atomic theory? Give a summary of Anaxagora's philosophy and examine it.

*Or,*

Estimate the contribution made by the Sophists to Greek thought, and in this connexion discuss the question of their historical importance.

4. Describe the Socratic Method. In what does the peculiar philosophical significance of Socrates lie? Compare and contrast his standpoint with that of the Sophists.

*Or,*

Write brief notes on :—

- (a) The four formal principles of Aristotle—the principles common to all spheres of reality according to him.
- (b) Aristotle's objections to the Platonic theory of ideas.
- (c) Aristotle's political views.

*Or,*

What did the Stoics mean by 'the fiery breath'? What are the points of agreement and difference between Stoicism and Epicureanism? Briefly criticise both of them.

5. Trace the history of Gnosticism. Mention the chief tenets of the Gnostics and examine them.

Or,

'Plotinus . . . first developed the Neo-Platonic doctrine in systematic form.' Discuss this fully. 'Plotinus . . . believed himself in agreement . . . with Plato.' Discuss how far really he was in agreement with Plato. 'Plotinus seeks . . . to show that his own doctrine is the inevitable consequence of certain Aristotelian teachings.' How does he prove this?

## SECOND HALF

### (PLATO AND PLATO'S REPUBLIC)

Answer ANY THREE questions

1. Discuss Plato's scientific method, and in this connexion point out Socrates's influence on him.

Or,

Discuss fully the question as to what Platonic Matter is.

2. Exhibit Plato's doctrine of the World-Soul and give the history of the human soul after him. Examine his views on the latter subject.

3. What is virtue according to Plato? What is his view of the Highest Good? Examine his views on both of these subjects, and point out, after Plato in the *Republic*, the connexion of these ethical questions with Politics.

Or,

Trace the history of Plato's Idealism, pointing out at what stage or stages it assumes the form of Mysticism.

4. Trace, after Plato in the *Republic*, the rise of a State, and in this connexion reproduce his account of the education and discipline of the Guardians. Examine his Socialism.

5. What does Plato say in the *Republic* about imitative art and poetry? How does he illustrate his remarks? Explain briefly the Platonic theory underlying these remarks.

Or,

'Hence, in all likelihood, democracy, and only democracy, lays the foundation of despotism.' Fully develop the thoughts contained in this extract from the *Republic* and examine them.

## SECOND PAPER

The questions are of equal value

### FIRST HALF

Examiner—MR. A. C. DAS, M.A.

Answer ANY THREE questions

1. Explain and examine the Cartesian dictum, 'cogito, ergo sum.'

2. 'Substance' is the predominating concept in modern philosophy, from Descartes, to Leibnitz. Discuss. Fully bring out the orientation the concept receives in the hands of Leibnitz.

3. Spinoza fixes on 'Substance' as the ultimate reality; his philosophy is, therefore, characterised by some as 'Naturalism.' Do you agree? Discuss the fundamental trend of Spinozism.

4. Elucidate how Locke can be regarded as a precursor of Kant.

5. Pluralism of Leibnitz is wrecked on his notion of 'Actus purus' (pure activity), as actually realised in the highest monad, and as the ideal to the other monads.

Discuss.

## SECOND HALF

Examiner—PROF. H. L. HALDAR, M.A., PH.D.

1. Summarise, as clearly as you can, Kant's argument in the 'Transcendental Deduction of the Categories.' What, in your view, are its strength and weakness?

Or,

Make a comparison of Kant's idealism with that of Berkeley.

2. What are Kant's formulæ for the moral law and how are they related to each other.

Or,

Explain and examine Kant's view of the relation between the Sublime and the Beautiful.

3. Compare with each other Fichte's, Schelling's, and Hegel's conception of the Absolute, explaining clearly the significance of it in the system of the last.

Or,

'The universal mind is through the medium of the categories realised in nature and nature, permeated and sustained by the categories, finds in nature its own essence and meaning.' Elaborate this Hegelian conception.

## THIRD PAPER

*The questions are of equal value*

Attempt ANY THREE questions from EACH half

## FIRST HALF

Examiner—DR. A. N. MUKHERJEE, M.A., PH.D.

1. Explain on what grounds the Chārvāka system rejects all *pramānas* except Perception. Cite parallels from European Philosophy.

2. Briefly explain the respective tenets of the four schools of Buddhist Philosophy in regard to the External World, citing parallels from European Philosophy.

3. Summarise the teachings of the *Bhāgavat-gītā* on the following :—

(a) The doctrine of immortality.

(b) The doctrine of the three *guṇas*.

4. How is the conception of the Self developed in the *Upanishads*?

5. Furnish explanatory and critical notes on *any two* of the following :—

- (a) The four Sublime Truths of Bauddha Philosophy.
- (b) The Jaina doctrine of Syāt-vāda.
- (c) The fundamental categories of Jaina Philosophy.
- (d) Release (*mokṣa*) as interpreted by the different schools of Indian Philosophy.

## SECOND HALF

*Examiner*—MR. S. C. CHATTERJEE, M.A.

1. Analyse inference as a process of reasoning, and discuss the different methods of establishing *vyāpti* or the universal proposition involved in inference.
- 2 Explain and examine the theism of the Nyāya from the standpoint of Western theism.
- 3 Expound the atomic theory of the Vaiśeṣikas, and show how far it is consistent with their theology.
4. Discuss the theories of causality in the Nyāya, the Sāṃkhya, and the Advaita Vedānta systems with reference to parallel views in European Philosophy.
- 5 Criticise the views of Śaṅkara and Rāmānuja with regard to the value of *karma* and *jñāna* as means to self-realisation (*mokṣa*).

Or,

Discuss the different theories of perceptual error or illusion in Indian Philosophy.

## FOURTH PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—RAI BAHADUR K. C. BHATTACHARYYA, M.A.

*Answer ANY THREE questions*

1. Present and examine the Kantian conception of the object being constructed by the knowing of it.
2. Discuss the conception of thought-content or meaning as subsistent and not existent.
3. Explain predication as the reference of an ideal content to reality. Show how this view of predication applies to the existential judgement.
4. Should a point of similarity as distinct from the relation of similarity be regarded as a fact? Examine the concept of numerical distinction between exact similars.
5. Is there a relation of meanings as distinct from the relation of facts? In what sense, if at all, does a relation constitute its terms?

## SECOND HALF

Examiner—MR. PHANIBHUSHAN ADHIKARI

Answer ANY THREE questions

1. Indicate critically the modern position on the distinction made between *Existence* and *Reality*. 'Existence is not reality and reality must exist.' (Bradley.) Discuss this puzzle.

2. How is Truth distinguished from Validity, and in what exact sense does Bradley admit degrees of truth? Discuss, in light of the distinction, whether what are called degrees of truth are really so.

3. State carefully the doctrine of Relativity of Knowledge as upheld in ancient and modern times. Estimate critically the pragmatic position with regard to the doctrine.

4. Explain carefully the notions of Correspondence and Consistency as tests of Truth. Discuss how far both can be brought under the Theory of Coherence.

5. Bring out clearly the exact significance of *Pramā* (Cognition) and its *Pramāṇya* (Validity) as understood in Indian philosophy. Discuss how far the Naiyāyika position on the latter can be said to be a pragmatic one.

## THEORY OF KNOWLEDGE AND METAPHYSICS

## FIFTH PAPER

Examiner—DR. SAROJKUMAR DAS, M.A., PH.D.

The questions are of equal value

Attempt THREE questions from EACH half

## FIRST HALF

1. Review critically the different theories of Space and Time, and expound view of Space and Time from the standpoint of the modern doctrine of Relativity. How far, if at all, does the latter justify the idealistic thesis that Space and Time are nothing but forms of intuition?

2. Discuss the point of the assertion that 'our power is an instance of causality; causality is not the work of power.' How would you defend the notion of causality against objections to it from the standpoint of 'logical atomism,' such as that of Mr. Bertrand Russell?

3. What is the metaphysical bearing of the principle of the 'autonomy of life'? Attempt a critical estimate of the respective arguments of the Mechanist and the Vitalist concerning the evolution of Life.

4. Expound, with historical references, the precise significance of *Māyā* as an explanatory principle of the relation of the Absolute to the world of Becoming. Do you trace a corresponding principle in Hegel in a similar context?

5. What is the rôle of Feeling in the problem of Values? Determine the question of the objectivity of Values, and discuss, critically as well as historically, the different relations in which Value stands to Reality.

## SECOND HALF

1. 'The sting of absolute idealism lies in its assertion that the parts of the world are not ultimately real or true but only the whole is true' (Alexander.) Discuss, with specific reference to its accredited exponents, the justice of the remark, and state what you consider to be the shortcomings of Absolute Idealism.

2. Estimate the importance of Royce's contribution, as distinguished from that of Bosanquet and the English Neo-Hegelians in general, to Absolute Idealism.

3. Attempt a critical review of Croce's 'Philosophy of Spirit.' Elucidate, after Croce, what is living and what is dead of the philosophy of Hegel, and show how Giovanni Gentile reacts upon the situation in his *Theory of Mind as Pure Act*.

4. Following up the 'signs in contemporary philosophy of a return to epistemological realism,' institute a critical comparison between English and American Neo-realism. Indicate the main points of divergence between Neo-realism and Critical Realism with regard to their respective analysis of Perception as carried out by Moore, Russell, Alexander, Whitehead, and Santayana.

5. 'The difference between Bergson and William James is the difference between a psychological biology and a biological psychology.' Develop the parallelism and points of contact between the two thinkers, tracing, if possible, their descent from a common philosophic ancestor.

## PSYCHOLOGY

### FIRST PAPER

#### (GENERAL AND PHYSIOLOGICAL)

*The questions are of equal value*

### FIRST HALF

*Examiner*—MR. HARIDAS BHATTACHARYYA, M.A.

*Answer THREE questions only*

1. Discuss the question of the cerebral localisation of mental functions with due reference to the integrative action of the nervous system and the unitary character of mind.

2. Indicate the relations of the various colour sensations among themselves and to the sensations of brightness.

Outline in this connection Miss Ladd-Franklin's theory of visual sensation.

3. How have the following been explained physiologically?—

Affection, meaning, apperception, hallucination, colour-blindness.

4. Distinguish, with illustrations, the following :—

Percept, eidetic image, dream image.

How do you explain the sensory vividness of dreams?

5. Write critical notes on *any three* of the following :—

(a) Muller's theory of the specific energy of nerves.

(b) Wundt's tri-dimensional theory of feeling.

(c) Ward's view of presentation-continuum.

(d) James's theory of psychic fringe.

(e) Watson's activity-stream.

(f) Thorndike's theory of animal learning.



## SECOND HALF

*Examiner*—DR. SUHRITCHANDRA MITRA, M.A., D. PHIL.

*Attempt ANY THREE*

1. Elucidate clearly what is meant by Red-integration. How does Hollingworth apply this principle in interpreting thought-processes?
  2. Discuss Ward's view of Attention. How does the modern psychologist proceed to study the attentive process?
  3. What is a Conditioned Reflex? Discuss critically whether the concept of the conditioned reflex can be accepted as the fundamental concept in Psychology.
  4. Write an essay on the distinction between 'the physical' and 'the psychical.'
  5. Discuss the different theories of Perception, with special reference to the Gestalt standpoint.
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## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. ANUKULCHANDRA MUKHERJEE, M.A.

*Answer ANY THREE questions*

1. Discuss the theory of unconscious cerebration as an explanation of the subconscious.
2. Give a brief historical account of the Hormic School of Psychology, noting the advance it has made on the earlier schools.
3. State clearly Aristotle's Doctrine of Entelechy, and trace its influence upon subsequent developments of psychology.
4. Discuss, with special reference to Structuralism, Functionalism, and Behaviorism, the main grounds on which the conscious self as the basal fact of psychology has been questioned.
5. Sketch the different theories of psychical causation adding comments on each.

## SECOND HALF

*Examiner*—MR. HARIPADA MAITI, M.A.

*Only THREE questions are to be attempted*

1. Describe the Free Association Method as applied in Dream-analysis. Examine the basis of Freud's doctrine of Dream-symbolism.
  2. Discuss McDougall's and Jung's views on dreams.
  3. Write a short essay on Feeble-mindedness or the Unconscious.
  4. Give an account of the development of the Libido.
  5. What light do Köhler's experiments on apes throw on the theory of Animal learning?
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## LOGIC

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—SIR S. RADHAKRISHNAN, KT., M.A., D.LITT.*Answer ANY THREE questions*

1. Compare the views of Plato and Hegel on the relation of Logic to Metaphysics.
2. Indicate the organic relation of form and matter of thought by reference to the varieties of judgment.
3. Do you agree with the contention that the non-contradictory is, in principle, unattainable by thought?
4. Does every negative imply a positive? Discuss, in this connection, the significance of a negative judgment.
5. Show how the disjunctive judgment is best adapted to the exposition of the world as a system.

## SECOND HALF

*Examiner*—RAI BAHADUR K. C. BHATTACHARYYA, M.A.*Answer ANY THREE questions*

1. Can a thinking synthesis of given beliefs yield a new belief? Do we know any *new* content in the conclusion of (i) an immediate inference, (ii) a syllogism?
2. An inferred conclusion is said to be justified (i) by facts constituting the evidence, (ii) by a general premise, (iii) by the axiom of inference. Examine and relate the three conceptions of justification.
3. Is inductive inference capable of being viewed as a special case of deductive inference?
4. Is the concept of causal relation presupposed by induction or established by induction? Under what conditions, if at all, does the absence of  $x$  followed by the absence of  $y$  prove a necessary connexion between  $x$  and  $y$ ?
5. Mathematical reasoning involves intuitional synthesis rather than thinking synthesis.

Examine the statement.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—RAI BAHADUR K. C. BHATTACHARYYA, M.A.*Answer ANY THREE questions*

1. 'Any observed relation  $A-B$  will be universal unless it has concomitants, a change which is universally followed by a change in the relation itself.' (*Hobhouse.*)

Explain and examine the statement.

2. Present and examine Bradley's criticism of Mill's theory of generalisation.

3. What is an empirical law? Discuss the statement. A law reached by the eliminative methods of induction is to be regarded as an empirical law till it is found to be consistent with other established laws.

3. Must inductive inference start with the framing of an explicit hypothesis? Is a hypothesis merely imagined or inferred by a probable reasoning? How far is an unintuitable hypothesis admissible in scientific investigation?

5. Discuss the meaning and value of the Law of Identity in Logic.

## SECOND HALF

*Examiner*—MR. ADHARCHANDRA DAS, M.A.

*Answer ANY THREE questions*

1. Determine the point of view from which the science of thought turns out to be the science of being. Must Logic as science of thought necessarily merge into Metaphysics? Discuss.

2. Is it true that the principle of contradiction has been flatly denied from the point of view of the Hegelian Dialectic. Discuss.

3. Bring out the specific function Kant assigns to Dialectic.

4. Show how Bain, in his theory of judgment as inducement to action, anticipates the pragmatists on the point.

5. Critically examine Johnson's theory of proposition.

## ETHICS

### FIRST PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—RAI BAHADUR K. C. BHATTACHARYYA, M.A.

*Answer ANY THREE questions*

1. How far is a metaphysical conception of the spirit necessary to the understanding of morality? Has Green succeeded in showing the necessity?

2. Discuss the concept of free will (a) as psychic causality, (b) as a moral postulate.

3. How does Wundt connect the concepts of moral end, moral norm, duty, and virtue? Are there many fundamental moral norms forming a system?

4. Give a connected exposition of the different formulations of the moral law by Kant. Examine the charge of formalism and subjectivism against Kantian Ethics.

5. Discuss Green's strictures on (i) psychological hedonism, (ii) utilitarianism.

## SECOND HALF

Examiner—DR. SUSILKUMAR MAITRA, M.A., PH.D.

Answer ANY THREE questions

1. What are the essential conditions of moral progress? Is social revolution conducive to moral progress in any way?

2. What are the 'Rights of Man'? How are 'Rights' related to 'Duties'? Do 'might' in any way create 'right'?

3. Analyse the concept of 'Property,' and show how far the institution of 'property' is necessary for the development of moral personality. May one person be the property of another? If not, why not?

4. Explain and illustrate :—

'The true good is, and in its earliest forms was, a social good, in the idea of which a man does not distinguish his own good from that of others.'

5. Discuss the following :—

'Ethical institutions like the family and the State are not constituted by contract. They are themselves more concrete relationships than contract, and are the framework within which contract is possible.'

## SECOND PAPER

The questions are of equal value

## FIRST HALF

Examiner—DR. M. N. SARKAR, M.A., PH.D.

Answer ANY THREE questions

1. Explain and examine Moore's assertion—'Good is a simple notion just as yellow is a simple notion.'

2. Examine the following ethical propositions :—

(i) Pleasure is good.

(ii) Pleasure is the sole good.

(iii) Good means pleasure.

3. 'Moral good is the realisation of the moral capability.' (Green.) Explain and examine. Indicate the contribution of reason and will to the formation of the moral life.

4. 'Duty is the obligation to act from reference to law.' (Kant.) Expound and point out the merit and the shortcoming of this conception of duty.

5. Examine Wundt's theory of conscience and the origin of the moral imperatives.

6. Examine the possibility of a moral life without Theological and Meta-physical implications.

## SECOND HALF

*Examiner*—DR. ADITYANATH MUKHERJEE, M.A., PH.D.

*Attempt ANY THREE*

1. Estimate the relative importance of the following as factors of social development :—

- (a) Association.
- (b) Imitation.
- (c) The consciousness of kind.

2. Explain the conception of Social Progress, giving the criteria by which it can be estimated. What are the chief dangers which threaten Social Progress?

3. How would you interpret the relation of Society and the Individual? Discuss how far the analogy of a social organism is helpful in understanding the nature of society.

*Either,*

4. State and explain the principal laws which govern the development of society.

*Or,*

Write an explanatory note on *either* of the following :—

- (a) Social Mind.
- (b) Social Ideal.

5. Write an essay on Educational Institutions, dwelling upon the following points :—

- (a) Significance of Education and its different kinds.
- (b) Education in relation to the State.

## PHILOSOPHY OF RELIGION

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—RAI BAHADUR K. N. MITRA, M.A.

*Answer ANY THREE questions*

1. What is the attitude of Philosophy to Religion generally? Are God and the Absolute identical? Give reasons for your answer.

2. Is Free Will an essential condition of Religion? If so, in what sense? Discuss the position that there can be no religion without morality.

3. 'Strict knowledge according to Spencer, is confined to appearances behind which God remains wholly and forever concealed as Inscrutable Reality.' Do you support this view? If not, why not?

4. What is meant by Mysticism? What part does it play in religion?

5. What do you understand by 'the seat of religious authority'? Is there any proof of its existence? Examine the value of such proof.

## SECOND HALF

*Examiner*—DR. S. K. DAS, M.A., PH.D.

*Only THREE questions are to be attempted*

1. Trace the origin and development of the idea of God in European philosophy, citing parallels, wherever possible, from Indian thought.
  2. Show that 'all proofs that God exists are pleas put forward in justification of our faith and of the particular way in which we feel that we must apprehend this highest principle.' Justify the contention, with special reference to the Ontological Proof.
  3. 'The great question about religion is not whether God exists but rather what God is.' Discuss, in the light of this statement, the natural and moral attributes of God with specific reference to the unity of God as Cause and God as Perfection.
  4. Is the contrast of Ego to Non-Ego essential to Personality? If not, state what you consider to be the essence thereof, and whether it is essentially applicable to God.
  5. 'The Absolute for me cannot be God, because in the end the Absolute is related to nothing, and there cannot be a practical relation between it and the finite will.' (Bradley.) Attempt a critical review of this position, as well as other kindred attempts in contemporary philosophy to maintain the distinction between the Absolute and God.
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## SECOND PAPER

*Examiner*—MR. S. C. CHATTERJEE, M.A.

*The questions are of equal value*

## FIRST HALF

*Answer ANY THREE questions*

1. Explain and examine the concepts of 'immanence' and 'transcendence' as applied to the relation between God and the world, with special reference to the question of God's infinity and man's free-will.
2. How do you explain the idea of God's incarnation? What is the popular idea about it and what is your own estimation of it?
3. Explain and examine the following statements :—
  - (i) God maintains the world after creating it.
  - (ii) God, having created the world, leaves it alone.
4. What do you mean by evolution as a philosophy of the world? What are its implications with regard to the constitution of Nature and the destiny of the human individual?
5. 'The monistic conception of God is not the theism of the West, but the pantheism of the East.' Discuss the truth of this statement.

## SECOND HALF

*Answer ANY THREE questions*

1. Expound the category of 'Individuality,' and discuss the question of its application to God.

2. 'In the deepest view the evil of the world is contributory to or an essential condition of the perfection of the whole.' Discuss the truth of this statement with reference to alternative solutions of the problem of evil.

3. What are your reasons for accepting or rejecting the belief in the pre-existence and immortality of the finite self?

4. Explain the law of *karma*, and examine its bearing on our moral and religious life.

5. What is the motive behind the idea of an eternal life? Explain and examine the different views with regard to its nature and realisation.

## SPECIAL BRANCH—INDIAN PHILOSOPHY

### (GROUP III)

#### FIRST PAPER

#### VEDANTA—TRANSLATION

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. KOKILESWAR BHATTACHARYA, M.A.

*Full Marks*—50

1. Explain the terms *Udyā* ( विद्या ) and *Atyā* ( अविद्या ) as detailed in Sankara's Introduction.

2. There are in the scripture passages of two-fold character referring to Brahman : the one indicates that it is affected by differences ( विशेष ); the others, e.g., not coarse, not fine, not long, not short, etc., indicate its freedom from all differences. The Pantheists assert both the unity and the multiplicity to be real. Quote some of the passages from the commentary of Sankara where he refutes this pantheistic view, declaring that a thing cannot have a double nature of its own. Was Sankara a pantheist? Give reasons for your answer.

3. Prove the following :—

As Brahman is a *pure being*, it cannot have sprung—

- (a) from pure being;
- (b) from differentiated being;
- (c) from non-being.

Prove also that it is not possible to doubt the self.

*Or,*

State briefly the respective views of the old Vedantic teachers : Āmarathya ( आश्वमेध ), Oṣṇolomi ( औषलोमि ), and Kāśhakṛishna ( काशकृष्ण ) as recorded in the *Brahma-Sūtra*.

#### SECOND HALF

*Examiner*—DR. ABHAYKUMAR GUHA, M.A., PH.D.

*Answer ANY THREE*

1. Is Vedantism idealistic or realistic from the standpoint of perception? Give reasons for your answer.

2. Is it possible to explain on **रचना** the theory of the Sāṃkhya? If not, why not?

3. If Brahman is viewed as the material cause of the universe also, how does the necessity for **माया** as defined by Sankara arise?

4. What are the five functions of **मुख्यप्राण** according to the Vedantists?

## SECOND PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner*—MR. GOPINATH KAVIRAJ, M.A.

### VEDANTA PARIBHĀSA

*Answer ANY THREE questions*

1. What grounds are there to believe that the knowledge arising from scriptural sentences is perceptual and *not verbal*? How does the author of the Paribhāṣā distinguish between perceptual knowledge and verbal knowledge?

2. (a) Show the process of inference whereby the world as perceived by us all is proved to be unreal.

(b) Explain how in the intuition of an object the immediacy of the intuition as well as of the object is determined.

3. What is the technical sense of the expression—‘**प्रातिभासिक सत्ता**’? In the erroneous perception of a snake in a rope, account for the appearance of the snake which is ‘**प्रातिभासिक**’.

4. Explain the following couplet clearly :—

**संसर्गासङ्गिसम्यग्धीहेतुता या गिरामियम् ।**

**उक्ताऽखण्डार्थता यद्वा तत्प्रातिपदिकार्थता ॥**

Show, in this connection, how the scriptural sentences, e.g. **तत्त्वमसि** etc., are described as **अखण्डार्थक**.

### SECOND HALF

*Examiner*—DR. SURENDRANATH DASGUPTA, M.A., PH.D.

*Answer ANY THREE*

1. Explain clearly the Rāmānuja view of reality as Viśiṣṭādvaita.

2. Give a brief but clear exposition of the main objections of Rāmānuja against Śaṅkara as detailed in the Bhāṣya of Rāmānuja.

3. In what sense is illusion possible according to Rāmānuja?

4. Compare or contrast the religio-philosophical goal of Rāmānuja and Śaṅkara.

5. What is the nature of perception in Rāmānuja and Śaṅkara?



## SAMKHYA-YOGA GROUP

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. SURENDRANATH DASGUPTA, M.A., PH.D.*Answer ANY THREE*

1. Explain the parināma theory of Sāṃkhya and its application to the evolution of the Sāṃkhya categories.
2. Compare and contrast the Sāṃkhya theory of guṇas with the Nyāya atoms.
3. Discuss the points of affinity and difference between Buddhism and Sāṃkhya.
4. Discuss if Sāṃkhya is right in admitting a numerical plurality of the puruṣas while holding them to be absolutely homogeneous as pure intelligence. How would it have adversely affected the Sāṃkhya theory if one pure intelligence like that of the Vedānta was admitted?
5. How does the Sāṃkhya apply its theories of perception and inference for propounding their doctrine of the guṇas and the puruṣas?

## SECOND HALF

*Examiner*—DR. ABHAYKUMAR GUHA, M.A., PH.D.*Answer ANY THREE*

1. Is the Sāṃkhya system realistic or idealistic from the standpoint of perception? Give reasons.
2. “मुक्तात्मनः प्रशंसा उपासासिद्धय वा ।”  
Explain in the light of the context.
3. How do the Sāṃkhyas explain the agency of the पुरुष and the intelligence of the बुद्धि ?
4. What is the principal प्रमाण according to the Sāṃkhyas, and why?
5. “समाधिसुषुप्तिमोक्षेषु ब्रह्मरूपता ।” Discuss.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—DR. S. N. DASGUPTA, M.A., PH.D.*Answer ANY THREE questions*

1. What is meant by vytti and what is its nirodha, and how is it primarily effected?
2. Describe elaborately the theory of rebirth according to the Vyāsa-bhāṣya and Vacaspati's commentary.

3. What is the position of God in Yoga system? Has the Yoga improved upon the Samkhya by this assumption? If so, in which way?

4. Discuss the nature of the various stages of Samādhi leading up to Kaivalya.

5. Explain clearly the concepts of *sampekāra*, *vāsanā*, and *kleśas* in relation to *samsāra*, and show how the possibility of liberation is not ruled out in spite of such hindrances.

## SECOND HALF

*Examiner*—DR. S. K. MAITRA, M.A., PH.D.

*Answer ANY THREE questions*

1. Distinguish between *Ārambha*, *Pariṇāma*, and *Vivarta* as theories of cosmogenesis. What is the Yoga view?

2. In what sense is the subject a necessary condition of the world of objects? Explain the Yoga view of the question, and compare it with the Shankara-Vedānta view.

3. Expound the Yogo Doctrine of Memory, and give your own estimate of the Yoga Psychology in this respect.

4. Explain the Theism of Yoga, and give a comparative estimate of the Yoga Theistic Argument and Auselm's Ontological Argument.

5. How is immediate experience related to mediation? Explain the Yoga view of the question, and compare it with Bergson's.

## EIGHTH PAPER

(ESSAY)

*Examiner*—RAI BAHADUR K. C. BHATTACHARYYA, M.A.

*The questions are of equal value*

Write an essay on any one of the following subjects :—

- (1) The case for and against materialism.
- (2) Is Divine existence credible?
- (3) Bradley's conception of the Absolute—an exposition and criticism.
- (4) The place of moral value among values.
- (5) The Vedantic conceptions of Brahman and Iswar.
- (6) Yoga as a discipline for intuitive knowledge.
- (7) The place of faith and reason in religion.
- (8) The doctrine of re-incarnation.
- (9) Heraclitus and Bergson—a comparison and a contrast.
- (10) Tendencies of thought in Europe and America in the twentieth century.
- (11) The concept of Repression.
- (12) Aristotelian Logic and *Navya Nyāya*—a comparison and a contrast.

# M.A. and M.Sc. Examinations

## 1932

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### PURE MATHEMATICS

#### FIRST PAPER

*Examiners*—{MR. MANORANJAN GUPTA, M.Sc.  
DR. ABANIBHUSHAN DATTA, M.A., Ph.D.

*The questions are of equal value*

*Answer six questions only*

1. Explain what you mean by a power-series and its circle of convergence. Specify the circle of convergence for each of the three series

$$1 + \sum_{n=1}^{\infty} (-1)^n \frac{z^{2n}}{(2n)!}; \quad \sum_{n=1}^{\infty} (-1)^{n-1} \frac{z^n}{n}; \quad 1 + \sum_{n=1}^{\infty} n! z^n.$$

Shew that

$$Lt \quad \frac{(n-1)!}{z(z+1)(z+2) \dots (z+n-1)} \rightarrow$$

is finite and definite if  $z$  is not a negative integer. What is this limit known by in *Analysis*?

2. When is a series whose terms are all functions of a real variable said to be *non-uniformly* convergent at a point? Explain your answer with the help of the series

$$x + x(1-x) + \dots + x(1-x)^n + \dots$$

Shew (by giving an example) that a series may be *uniformly* convergent without being *absolutely* convergent.

Establish also the converse by giving an example.

Examine for uniform convergence at  $x = \pi$  the series

$$\sin x - \frac{\sin 2x}{2} + \dots + (-1)^{n-1} \frac{\sin nx}{n} + \dots$$

3. If a quadratic surd is converted into a simple recurring continued fraction, prove that its period begins with the second partial quotient and terminates with one which is double of the first.

If  $\frac{p_n}{q_n}$  is the  $n^{\text{th}}$  convergent to the continued fraction

$$\frac{1}{a+} \frac{1}{b+} \frac{1}{c+} \frac{1}{a+} \frac{1}{b+} \frac{1}{c+} \dots$$

prove that

$$p_{3n+3} = bp_{3n} + (bc+1)q_{3n}.$$

4. Explain what you mean by the *scale of relation* of a *recurring series*. Shew that to determine a scale of relation involving  $m$  constants it is necessary to know at least  $2m$  consecutive terms of the recurring series. Sum to  $n$  terms a recurring series whose scale of relation involves  $m$  constants.

Sum the series

$$\frac{1!}{a+1} + \frac{2!}{(a+1)(a+2)} + \dots + \frac{n!}{(a+1)(a+2) \dots (a+n)},$$

where  $a$  denotes a number other than a negative integer.

5. If the general biquadratic can be expressed as

$$m(x+a)^4 + n(x+\beta)^4,$$

shew that the invariant  $J$  vanishes; and obtain the equation whose roots are  $a$  and  $\beta$ . Calculate  $H, G, I$  for the above special biquadratic. Solve, *completely*, the general biquadratic equation when the invariant  $I$  vanishes.

6. Explain what you mean by the 'sum of the homogeneous products of  $r$  dimensions' of the  $n$  roots of the equation

$$x^n + p_1 x^{n-1} + \dots + p_n = 0.$$

Write down the same for  $r=5$ .

Prove the following relations :—

$$(i) \quad p_3 + \Pi_3 + p_1 \Pi_2 + p_2 \Pi_1 = 0,$$

$$(ii) \quad \frac{dS_{m+r}}{dp_m} = -(m+r)\Pi_r,$$

where  $\Pi_r (r=1, 2, 3, \dots)$  denotes the sum of the homogeneous products of  $r$  dimensions and  $S_m$  the sum of the  $m^{\text{th}}$  power of the roots of the above equation.

7. If a determinant  $\Delta$  which vanishes be bordered in any manner the product of the determinant so formed by the leading first minor of  $\Delta$  is equal to the product of two linear homogeneous functions of the added elements. Prove this.

Shew that

$$\begin{vmatrix} f_1(x) & f_1'(x) & \dots & f_1^{(r)}(x) \\ f_2(x) & f_2'(x) & \dots & f_2^{(r)}(x) \\ f_3(x) & f_3'(x) & \dots & f_3^{(r)}(x) \\ f_4(x) & f_4'(x) & \dots & f_4^{(r)}(x) \end{vmatrix} = 1152 \begin{vmatrix} 1 & -x & x^2 & -x^3 & x^4 \\ a_1 & b_1 & c_1 & d_1 & e_1 \\ a_2 & b_2 & c_2 & d_2 & e_2 \\ a_3 & b_3 & c_3 & d_3 & e_3 \\ a_4 & b_4 & c_4 & d_4 & e_4 \end{vmatrix}$$

where  $f_r(x) = a_r x^4 + 4b_r x^3 + 6c_r x^2 + 4d_r x + e_r$ , ( $r=1, 2, 3, 4$ ) and  $f_r'(x), \dots, f_r^{(r)}(x)$  denote the successive derived functions of  $f_r(x)$ .

8. Explain, with a diagram, how a knowledge of the  $n^{\text{th}}$  roots of unity enables you to inscribe in a circle a regular polygon of  $n$  sides. Enumerate, giving numerical illustrations, the various cases when the same can be done with the aid of Euclidean methods alone.

If  $a, b, c$  be the radii of three circles which touch each other externally and  $r_1$  and  $r_2$  the radii of the two circles that can be drawn to touch these three, shew that

$$\frac{1}{r_1} + \frac{1}{r_2} = \frac{2}{a} + \frac{2}{b} + \frac{1}{c}.$$

9. Shew that the logarithm of a complex quantity is *multiple-valued*. How do you generalize the *ordinary* definition of the logarithm? Obtain the *general* value of the logarithm so generalized. Name two more functions which are multiple-valued to an *infinite extent*, giving in each case their general values.

Prove that

$$\sin \theta \cdot \sin \theta - \frac{1}{2} \sin 2\theta \cdot \sin^2 \theta + \frac{1}{3} \sin^3 \theta \sin 3\theta - \dots = \cot^{-1}(1 + \cot \theta + \cot^2 \theta).$$

10. Establish, rigorously, the formula

$$\sin x = x \prod_{r=1}^{\infty} \left(1 - \frac{x^2}{r^2 \pi^2}\right).$$

Justify that the same can also be written as

$$\sin x = x \prod_{r=-\infty}^{+\infty} \left(1 + \frac{x}{r\pi}\right).$$

If 2, 3, 5, . . . are all the prime numbers, prove that

$$\left(1 - \frac{1}{2^2}\right) \left(1 - \frac{1}{3^2}\right) \left(1 - \frac{1}{5^2}\right) \dots = \frac{6}{\pi^2}.$$

11. In a spherical triangle, prove the following :—

$$(i) \quad \cos a = \cos b \cos c + \sin b \sin c \cos A,$$

$$(ii) \quad \sin A = \frac{\sqrt{(1 - \cos^2 a - \cos^2 b - \cos^2 c + 2 \cos a \cos b \cos c)}}{\sin b \sin c}.$$

If  $\theta, \phi, \psi$  be the arcs of great circles from  $A, B, C$  perpendicular to the opposite sides, prove that

$$\begin{aligned} \sin a \sin \theta &= \sin b \sin \phi = \sin c \sin \psi \\ &= \sqrt{(1 - \cos^2 a - \cos^2 b - \cos^2 c + 2 \cos a \cos b \cos c)}. \end{aligned}$$

State the corresponding result in *Plane Trigonometry*.

12. State (without proof) *any three* of the following with reference to the approximation to the real roots of an equation : Sturm's theorem, Regula Falsi, Newton's process, Horner's process. Find, correct to two decimal places, the real as well as the imaginary parts of the complex roots of  $x^5 - 4x + 2 = 0$ .

## SECOND PAPER

Examiners— { MR. P. GANGULY, M.A.  
 { DR. N. N. SEN, D.Sc.

*The questions are of equal value*

*Attempt ANY SIX questions*

1. An endless elastic string, whose modulus of elasticity is  $\lambda$  and natural length is  $2\pi c$ , is placed in the form of a circle on a smooth horizontal plane and is acted upon by a force from the centre equal to  $\mu$  times the distance per unit mass of the string. Shew that its radius will vary harmonically about a mean

length  $\frac{2\pi\lambda c}{2\pi\lambda - m\mu c}$  where  $m$  is the mass of the string, assuming

$$2\pi\lambda - m\mu c > 0$$

What happens when  $2\pi\lambda = m\mu c$ ?

2. Find the components of velocity and acceleration of a particle referred to two dimensional rectangular axes revolving with a constant angular velocity  $\omega$  about a fixed origin.

$PQ$  is a tangent at  $Q$  to a circle of radius  $a$ ;  $PQ$  is equal to  $\rho$  and makes an angle  $\theta$  with a fixed tangent to the circle; shew that the accelerations of  $P$  along and perpendicular to  $QP$  are respectively

$$\ddot{\rho} - \rho \dot{\theta}^2 + a \ddot{\theta} \text{ and } \frac{1}{\rho} \frac{d}{dt}(\rho^2 \dot{\theta}) + a \dot{\theta}^2$$

3. (i) A particle describes a path which is nearly a circle about a centre of force ( $=\mu u^2$ ); find the condition that this may be a stable motion.

(ii) Two equal masses are connected by a string which passes through a hole in a smooth horizontal plane, one of the masses hanging vertically. If

the mass on the plane be projected on the plane with velocity  $\sqrt{\frac{8ag}{3}}$  from an apse at a distance  $a$ ; shew that the other mass will rise through a distance  $a$ .

4. (i) A curve is described by a particle having a constant acceleration in a direction inclined at a constant angle to the tangent; shew that the curve is an equiangular spiral.

(ii) If an elastic string, whose natural length is that of a uniform rod, be attached to the rod at both ends and suspended by the middle point; find the inclination of the strings to the horizon at the maximum depth to which the rod will sink.

5. A heavy chain, of length  $l$ , is held by its upper end so that its lower end is at a height  $l$  above a horizontal plane; if the upper end is let go, shew that at the instant when half the chain is coiled up on the plane the pressure on the plane is to the weight of the chain in the ratio of 7 : 2.

6. (i) A particle rests on a rough curve whose equation is  $f(x, y) = 0$ , and is acted on by forces the sums of whose components along the axes of  $x$  and  $y$  are  $X$  and  $Y$ ; prove that the particle will rest at all points of the curve at which

$$X \frac{\partial f}{\partial x} + Y \frac{\partial f}{\partial y} > \cos \lambda \cdot \sqrt{x^2 + y^2} \cdot \sqrt{\left(\frac{\partial f}{\partial x}\right)^2 + \left(\frac{\partial f}{\partial y}\right)^2}$$

(ii) A heavy right cone is placed with its base on a rough inclined plane, the inclination of which is gradually increased; determine whether the initial motion of the cone will be one of sliding or tumbling over.

7. (i) Find the centroid of the portion of an ellipse cut off by a line joining the extremities of the major and minor axes.

(ii) Find the law of variation of mass per unit length in order that a string may hang in the form of a parabola.

8. Find the attraction-intensity of an infinite homogeneous elliptic cylinder at any external point situated on the major axis of a transverse section.

9. Show that the law of the inverse square is the only law of attraction for which a spherical shell of uniform thickness and density will produce no resultant attraction on any internal particle.

10. Find the attraction of a homogeneous ellipsoid of revolution round the minor axis (oblate spheroid) on a particle placed on its surface.

11. (i) If two finite bodies have the same external level surfaces and have equal masses, their attractions at all external points are the same in magnitude and direction.

(ii) Show that the attraction of a thin prolate spheroidal homoeoid at any external point is the same as that of a thin homogeneous straight rod joining the foci.

### THIRD PAPER

Examiners— { DR. SURENDRAMOHAN GANGULY, D.Sc.  
MR. MOHITMOHAN GHOSH, M.Sc.

*The questions are of equal value*

*Candidates are required to answer six questions only*

1. If the two straight lines

$$l_1\alpha + m_1\beta + n_1\gamma = 0,$$

$$l_2\alpha + m_2\beta + n_2\gamma = 0,$$

are perpendicular to each other, prove that

$$\Sigma l_1 l_2 - \Sigma (m_1 n_1 + m_2 n_2) \cos A = 0.$$

What is the corresponding result in *areal* co-ordinates?

The conic

$$l\beta\gamma + m\gamma\alpha + n\alpha\beta = 0$$

is such that the normals to it at the points  $A, B, C$  meet in a point, show that

$$bcl(m^2 - n^2) + cam(n^2 - l^2) + abn(l^2 - m^2) = 0.$$

2. Find the trilinear equation of the circle passing through the mid-points of the sides of the triangle of reference and transform the equation obtained in *areal* system of co-ordinates.

Put the *areal* equation in the form

$$\frac{a^2}{y+z-x} + \frac{b^2}{z+x-y} + \frac{c^2}{x+y-z} = 0,$$

and interpret the result geometrically.

Prove that this circle passes through the feet of the perpendiculars from the vertices to the opposite sides and the middle points of the lines joining the orthocentre to the vertices and hence show that these nine-points lie on a single circle.

State the general proposition of which the above is a particular case.

3. Prove that the two circular points at infinity may be represented by the equations

$$-a = \beta e^{\sqrt{-C}} = \gamma e^{\sqrt{-B}}$$

$$-a = \beta e^{\sqrt{-C}} = \gamma e^{\sqrt{-B}}.$$

Show the importance of these points in connection with the theory of foci.

If the circular points are cusps on a curve of class  $m$  possessing no other singularity and having no other relation with the elements at infinity, show that it has  $m-3$  real single foci and one real triple focus.

4. Find the condition that the general equations of the second degree may represent a parabola in a system of homogeneous co-ordinates in which the equation of the line at infinity is

$$pX + qY + rZ = 0.$$

Hence show that if  $F=0$  denotes a curve of the  $n$ th degree in Cartesian co-ordinates, the equation

$$\left( \frac{\partial^2 F}{\partial x^2} \right) \left( \frac{\partial^2 F}{\partial y^2} \right) = \left( \frac{\partial^2 F}{\partial x \partial y} \right)^2$$

represents the locus of points whose polar conics with respect to  $F=0$  are parabolas.

Find the locus of points whose polar conics with respect to a curve of the  $n$ th degree given in any system of homogeneous co-ordinates are straight lines.

Calculate the degree of this locus and show that it passes through all the double points and points of inflexion of the original curve.

5. State Salmon's theorem on polars and apply it to find the polar reciprocal of one circle with respect to another showing how the nature of the reciprocal depends only on the position but not on the magnitude of the auxiliary circle.

Show that the reciprocal of the conic.

$$25[(x-13)^2 + (y-17)^2] = (3x+4y-10)^2$$

with respect to the circle

$$x^2 + y^2 - 4x - 2y - 31 = 0,$$

is a rectangular hyperbola.

Prove (without assuming a more general result) that a curve and its polar reciprocal have the same deficiency.

6. Write down the anharmonic ratio of the pencil

$$y = m_1x, y = m_2x, y = m_3x, y = m_4x$$

and apply it to prove that when two straight line are inclined at an angle  $\theta$ , the anharmonic ratio of the pencil formed by them with the two isotropic lines through their common point is  $e^{\pm i\theta}$ .

Explain the importance of this result in the theory of Projection. What inference can you draw when  $\theta = \frac{\pi}{2}$ ?

Find the condition that the four lines

$$\begin{aligned} ax^2 + 2hxy + by^2 &= 0, \\ a'x^2 + 2h'xy + b'y^2 &= 0, \end{aligned}$$

may form a harmonic pencil.

Show that every line drawn through a biflexnode on a quartic is divided harmonically by the curve and the harmonic polar.

7. Prove by projection that the points of intersection of the opposite sides of a hexagon inscribed in a conic lie on a straight line. (Pascal's Theorem.)

Also deduce this as a particular case of Chasles' Theorem, viz.—

If a curve of the third order pass through eight of the points of intersection of two curves of the third order, it will pass through the ninth point of intersection.



State the general theorem on curves of the  $n$ th order of which Chasles' Theorem is a particular case.

Reciprocate Pascal's Theorem and show how by applying the reciprocal theorem a conical envelope can be constructed when five of its tangents are given.

To whom is the reciprocal theorem due?

8. If the two circles

$$\begin{aligned}x^2 + y^2 + 2gx + 2fy + c &= 0, \\x^2 + y^2 + 2g'x + 2f'y + c' &= 0,\end{aligned}$$

cut each other orthogonally, show that

$$2gg' + 2ff' = c + c'.$$

Find the equation of the circle cutting orthogonally the three circles

$$\begin{aligned}x^2 + y^2 + 2g_1x + 2f_1y + c_1 &= 0, \\x^2 + y^2 + 2g_2x + 2f_2y + c_2 &= 0, \\x^2 + y^2 + 2g_3x + 2f_3y + c_3 &= 0,\end{aligned}$$

in the form

$$\begin{aligned}x + g_1, \quad y + f_1, \quad g_1x + f_1y + c_1 \\x + g_2, \quad y + f_2, \quad g_2x + f_2y + c_2 \\x + g_3, \quad y + f_3, \quad g_3x + f_3y + c_3\end{aligned} = 0.$$

Find the envelope of a variable circle whose centre moves along the fixed conic

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1,$$

and which cuts orthogonally the fixed circle

$$x^2 + y^2 + 2gx + 2fy + c = 0.$$

State (without proof) two other methods by which an envelope of this type may be generated.

What is the general name of such envelopes?

9. If a curve has its maximum number of double points, show that the co-ordinates of any point on it can be expressed rationally in terms of a single parameter.

What inferences can you draw by applying this proposition in the case of (1) a straight line, (2) a proper conic?

Prove that a straight line may be represented parametrically by the equations

$$\begin{aligned}x &= l_1t + m_1, \\y &= l_2t + m_2, \\z &= l_3t + m_3.\end{aligned}$$

Show that the equations

$$\begin{aligned}x &= l(t+1), \\y &= mt(t+1), \\z &= -nt,\end{aligned}$$

represent a circum-conic, the co-ordinates of any point on which may also be given in a homogeneous system in the form

$$\begin{aligned}\xi &= t+1, \\\eta &= t(t+1), \\\zeta &= -t.\end{aligned}$$

10. Explain the difference between a point of inflexion and a double point and show that an inflexional tangent reciprocates into a cusp.

State the corresponding properties of nodes and nodal tangents and hence reciprocate the Plücker's equations

$$i = 8n(n-2) - 6\delta - 8k,$$

$$2\tau = n(n-2)(n^3-9) - 2(n^3-n-6)(2\delta+3k) + 4\delta(\delta-1) + 12\delta k + 9(kk-1),$$

the letters having their usual significance.

Prove that if the locus of points of inflexion can be obtained from the integral family of curves of the equation

$$\phi(x, y, p) = 0,$$

it will be included in the result obtained by the elimination of  $p$  between the equations

$$\phi = 0,$$

$$\frac{\partial \phi}{\partial x} + p \frac{\partial \phi}{\partial y} = 0$$

where  $p$  stands for  $\frac{dy}{dx}$ .

11. Explain what is meant by canonical form and reduce the equation of a cubic to the form

$$X^3 + Y^3 + Z^3 + 6mXYZ = 0.$$

Establish the relation of the curve to the new triangle of reference and hence prove that

(a) The harmonic polars of three collinear points of inflexion meet in a point.

(b) All cubics drawn through the nine points of inflexion on a non-singular cubic will have these points for points of inflexion.

12. Show that the equation

$$\frac{a}{x^3} + \frac{b}{y^3} + \frac{c}{z^3} + \frac{2f}{yz} + \frac{2g}{zx} + \frac{2h}{xy} = 0$$

represents a trinodal quartic.

Show that the tangents (other than the nodal tangents) from the vertex  $A$  are given by

$$By^3 - 2Fyz + Cz^3 = 0$$

and that their points of contact lie on the conic

$$1. ayz + hzx + gxy = 0.$$

Prove one of the following properties of the above quartic:—

(a) The six tangents drawn from the nodes meet the sides on the nodal triangle in six points lying on the conic

$$Ax^3 + By^3 + Cz^3 - 2Fyz - 2Gzx - 2Hxy = 0.$$

(b) The six points where the nodal tangents meet the sides of the nodal triangle lie on the conic

$$bcx^3 + cay^3 + abz^3 + 2afyz + 2bgzx + 2chxy = 0$$

## FOURTH PAPER

Examiner—{ DR. HARIDAS BAGCHI, M.A., PH.D.  
MR. B. M. SEN, M.A., M.Sc.

The questions are of equal value

Full marks for ANY SIX questions

1. Prove that

$$\frac{a}{y-z} + \frac{b}{z-x} + \frac{c}{x-y} = 0$$

represents a pair of planes whose line of intersection is *equally* inclined to the axes.

Shew that a line which always intersects two given lines and is perpendicular to one of them generates a hyperbolic paraboloid. Interpret the result when the two given lines are at right angles to each other.

2. Obtain the identical relation satisfied by the mutual distances of any five points in space.

Can you use this relation to calculate the radius of the sphere circumscribing a tetrahedron in terms of its edges?

3. Define an *umbilic* and show that a quadric ordinarily contains *twelve* umbilics (real or imaginary).

Determine the number of real umbilics in the case of an ellipsoid, hyperboloid of one sheet, and hyperboloid of two sheets.

When one quadric has plane contact with another, prove that the tangent plane at the umbilic of one cuts the other in a conic having the umbilic for a focus.

4. Show that the *contours* of two confocals seen from any point appear to intersect everywhere at right angles.

If through a given line tangent planes be drawn to a system of confocals, prove that the corresponding normals generate a hyperbolic paraboloid?

Discuss the special case when the given line is itself a normal to a surface of the system.

5. Distinguish between the *modular* and *umbilical* methods of generation of a conicoid.

Prove that the section of a quadric by a plane passing through a focus and the corresponding directrix is a conic having the same point and line for focus and directrix.

6. Show that the general equation of a conicoid having double contact with  $S=0$  can be written as

$$S + \lambda u^2 + 2\mu uv + \nu v^2 = 0,$$

where  $u=v=0$  is the chord of contact.

Show that the centres of conicoids having double contact with the surface

$$ax^2 + by^2 + cz^2 = 1$$

at its points of intersection with the chord  $x=1, y=1$  and intersecting the plane  $z=0$  in a circle lie on the line

$$z=0, \frac{x}{a} - \frac{y}{b} = \frac{1}{a} - \frac{1}{b}.$$

7. Prove the Serret-Frenet formulæ for the direction-cosines of the tangent, the principal normal and the binormal of a twisted curve.

Find the vector representing the rate of change of the acceleration of a point moving in three-dimensional space.

8. Define the *geodesic curvature* of a curve on a surface.

If the curve makes an angle  $i$  with one of the parametric curves, supposed orthogonal, prove that the geodesic curvature is

$$\frac{1}{\gamma} = \frac{di}{ds} + \frac{\cos i}{\gamma'} + \frac{\sin i}{\gamma''}$$

where  $1/\gamma'$  and  $1/\gamma''$  are the geodesic curvatures of the parametric curves.

9. Why is a *minimal* surface so called?

Prove that for a minimal surface, the asymptotic lines are orthogonal.

Verify that the surface

$$\begin{aligned}x &= 3u - u^3 + 3v - v^3 \\y &= i(3u + u^3) - i(3v + v^3) \\z &= 3(u^2 + v^2)\end{aligned}$$

is minimal and the lines of curvature are plane.

10. Define the *conformal representation* of a surface on a plane, and explain its importance in map-making.

What are *Mercator's projection* and the *Stereographic projection* of a sphere on a plane?

Show that the rhumb-lines (i.e., lines making a constant angle with the meridian lines) become straight lines in Mercator's projection and equiangular spirals in the stereographic projection.

11. Define *Beltrami's differential parameters* and explain their geometrical significance.

If the linear element of a surface be of the form

$$ds^2 = \cos^2 \alpha du^2 + \sin^2 \alpha dv^2,$$

where  $\alpha$  is a function of both  $u$  and  $v$ , prove that  $u$  and  $v$  are solutions of the equation

$$\Delta_1(\theta, \Delta_1\theta) = 2\Delta_2\theta(\Delta_1\theta - 1).$$

## FIFTH PAPER

Examiners— { MR. HARIPRASANNA BANERJEE, M.Sc.  
MR. S. C. GHOSH, M.A.

*The questions are of equal value*

*Any six questions carry full marks*

1. (a) Prove that a function continuous in a closed interval attains its bounds in that interval.

Deduce the proof of Rolle's theorem.

(b) If 
$$f(x) = f(0) + xf'(0) + \frac{x^3}{2!} f''(\theta x),$$

for  $f(x) = (1-x)^{\frac{1}{2}}$ , find the value of  $\theta$  as  $x$  tends to unity.

2. (a) Explain what is meant by the continuity of a function of two variables at any point.

Discuss the continuity of  $f(x, y)$  at the origin, where

$$f(x, y) = \frac{xy}{x^2 + y^2} \text{ and } f(0, 0) = 0.$$

(b) For the function

$$f(x, y) = y^2 \sin \frac{x}{y}, \quad f(0, y) = 0,$$

whatever  $y$  may be, obtain  $\frac{\partial f}{\partial x}$  at  $(0, y)$  and  $\frac{\partial f}{\partial y}$  at  $(x, 0)$  and thence show that at the origin

$$\frac{\partial^2 f}{\partial x \partial y} \neq \frac{\partial^2 f}{\partial y \partial x}.$$

3. (a) If  $u = f(x, y)$ , transform the equation

$$x^2 \frac{\partial^3 u}{\partial x^3} - 2xy \frac{\partial^3 u}{\partial x \partial y} + y^2 \frac{\partial^3 u}{\partial y^3} + 2y \frac{\partial u}{\partial y} = 0$$

by the substitution

$$x^2 = \xi \eta, \quad y^2 = \frac{\xi}{\eta}.$$

(b) Apply Lagrange's method of expansion to obtain one of the roots of the quintic  $x^5 + 4x + 2 = 0$  correct to three places of decimals.

4. (a) If  $u_1, u_2, u_3$  are three functions of the three variables  $x_1, x_2, x_3$  and if their Jacobian is identically zero, prove that some relation must subsist amongst  $u_1, u_2, u_3$  in which the  $x$ 's do not occur explicitly.

(b) If a functional relation exists between

$$u = f(x) + f(y) + f(z), \quad v = f(y)f(z) + f(z)f(x) + f(x)f(y), \quad w = f(x)f(y)f(z),$$

then prove that  $f$  must be a constant.

5. (a) Obtain Lagrange's condition for the maxima and minima of an explicit function of two variables.

(b) Examine for a maximum or minimum the function

$$y^2 \times y(ax^2 + bx^3) + abx^4, \quad a > b > 0,$$

at the origin.

6. (a) State and prove carefully a necessary and sufficient condition for a bounded function  $f(x)$  to be integrable R, in  $(a, b)$ .

(b)  $f(x)$  is definite and monotone in  $0 \leq x < 1$ , and  $f(x)$  is not bounded for  $x = 1$ . If the limit

$$\lim_{n \rightarrow \infty} \left[ f\left(\frac{1}{n}\right) + f\left(\frac{2}{n}\right) + \dots + f\left(\frac{n-1}{n}\right) \right]$$

exists, then prove that the integral

$$\int_0^1 f(x) dx$$

also exists.

7. (a) Prove under suitable conditions the Second Mean Value Theorem of the Integral Calculus.

(b) Test for convergence the integral

$$\int_2^{\infty} \frac{x^p}{(\sin x)^q} dx, \quad q < p+1.$$

8. (a) Prove the formula for the change of variables of integration in a multiple integral, stating the conditions under which it holds.

(b) Verify that the function given by

$$y = a \cos nx + \frac{\beta}{n} \sin nx + \frac{1}{n} \int_0^x \sin n(x-t)f(t)dt,$$

satisfies the differential equation

$$\frac{d^2 y}{dx^2} + n^2 y = f(x),$$

where  $a$  and  $\beta$  are constants.

9. (a) Prove Stokes' theorem in space under suitable conditions.

(b) Prove that the volume of the portion of the paraboloid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 2z$$

cut off by the plane  $z = p$  is  $\pi p^2 ab$ .

10. (a) Prove Fourier's theorem for  $f(x)$  when  $f'(x)$  exists everywhere.

(b) If  $f(x) = e^x$  in  $(-\pi, \pi)$ , expand  $f(x)$  by Fourier's theorem.

### SIXTH PAPER

Examiners—{ MR. NARENDRAKUMAR MAJUMDAR, M.A.  
,, HARIPRASANNA BANERJEE, M.Sc.

*The questions are of equal value*

*Full marks for ANY SIX questions, including the THIRD  
and NINTH questions.*

1. Solve any three of the following equations :—

(a)  $y \sqrt{1+h^2} = n(x+yp).$

(b)  $\frac{x^2}{a} + \frac{y^2}{b} = \frac{a-b}{a+b} \cdot \frac{x-yp}{x+yp}.$

(c)  $x^2 \frac{d^2 y}{dx^2} - x \frac{dy}{dx} + 2y = x \log x.$

(d)  $\frac{dy}{dx} = 2x - (x^2 + 1)y + y^2.$

2. (a) Solve the equation

$$p^2(2-8y)^2=4(1-y),$$

and obtain the equations of the Envelope, the Node-Locus, and the Tac-Locus.

- (b) Show that the complete primitive of

$$r^4 + r^2 \left( \frac{dr}{d\theta} \right)^2 = a^4$$

represents the family of equal lemniscates of Bernoulli

$$r^2 = a^2 \cos 2(\theta - \alpha),$$

inscribed in the circle  $r = a$ , which is the singular solution, with the point  $r = 0$  as a Node-Locus.

3. Solve any three of the following equations :—

$$(a) (3-x)D^2y - (9-4x)Dy + (6-3x)y = 0.$$

$$(b) (y^2x - 2x^4)p + (2y^4 - x^3y)q = 9z(x^3 - y^3).$$

$$(c) x^2r + 2xy s + y^2t = 0.$$

$$(d) p^2 + q^2 - 2px - 2qy + 2xy = 0.$$

4. (a) Shew that, if
- $y_1$
- and
- $y_2$
- be two particular solutions of the equation

$$-\frac{d^2y}{dx^2} + P\frac{dy}{dx} + Qy = 0,$$

the roots of  $y_1 = 0$  and  $y_2 = 0$  separate each other so long as both of these solutions remain continuous.

(b) Prove that the orthogonal trajectory of a system of confocal ellipses is a system of hyperbolas confocal with the ellipses.

5. (a) Solve the equation :—

$$\frac{(y+z-2x)dx}{(y-x)(z-x)} + \frac{(z+x-2y)dy}{(z-y)(x-y)} + \frac{(x+y-2z)dz}{(x-z)(y-z)} = 0.$$

- (b) Shew that any system of lines described on the surface of the sphere

$$x^2 + y^2 + z^2 = r^2$$

and satisfying the equation

$$(1+2m)x dx + y(1-x)dy + z dz = 0$$

would be projected on the plane of  $xy$  into parabolas.

- (c) Solve

$$\frac{dx}{X} = \frac{dy}{Y} = \frac{dz}{Z},$$

where

$$X = ax + by + cz + d,$$

$$Y = a'x + b'y + c'z + d',$$

$$Z = a''x + b''y + c''z + d''.$$

6. (a) Find the equation of a surface which belongs at once to surfaces of revolution defined by the equation

$$py - qx = 0$$

and to conical surfaces defined by

$$px + qy = z.$$

(b) Integrate the equation

$$(1+p^2)t - 2pqz + (1+q^2)r = 0,$$

having given that  $py - qz = 0$ ; and shew that a particular solution is

$$(x^2 + y^2)^{\frac{1}{2}} = c \cosh \frac{z}{c}.$$

7. If a polynomial  $f(\mu)$  is such that

$$\int_{-1}^1 \mu^k f(\mu) d\mu = 0$$

for  $k=0, 1, 2, \dots, (n-1)$ , prove that  $f(\mu)$  must be a constant multiple of  $P_n(\mu)$ .

Given that

$$P_n(z) = \frac{1}{\pi} \int_0^\pi \{z \pm \sqrt{z^2 - 1}\} \cos \phi \}^n d\phi,$$

prove that

$$P_n(\cos \theta) = (\cos \frac{1}{2} \theta)^{2n} F(-n, -n, 1, -\tan^2 \frac{1}{2} \theta).$$

8. Prove that

$$P_n(\cos \theta) = \frac{2}{\pi} \int_0^\theta \frac{\cos \left( n + \frac{1}{2} \right) \phi}{\sqrt{2} \sqrt{\cos \phi - \cos \theta}} d\phi,$$

when  $0 < \theta < \pi$ .

Hence show that

$$\lim_{n \rightarrow \infty} \{ \sqrt{n \sin \theta} P_n(\cos \theta) \}$$

is finite, when  $0 < \theta < \pi$

9. Prove that

$$\begin{aligned} x^n = & \frac{1 \cdot 2 \cdot 3 \dots n}{3 \cdot 5 \cdot 7 \dots (2n+1)} \left\{ (2n+1) P_n(x) + (2n-3) \frac{2n+1}{2} P_{n-2}(x) \right. \\ & + (2n-7) \frac{(2n+1)(2n-1)}{2 \cdot 4} P_{n-4}(x) \\ & \left. + (2n-11) \frac{(2n+1)(2n-1)(2n-3)}{2 \cdot 4 \cdot 6} P_{n-6}(x) + \dots \right\} \end{aligned}$$

$$\text{and } \log(1+x) = \log 2 - 1 + \frac{3}{1 \cdot 2} P_1 - \frac{5}{2 \cdot 3} P_3 + \frac{7}{3 \cdot 4} P_5 - \dots$$

10. Prove that

$$Q_n(\mu) = \frac{(-1)^n 2^n (n!) d^n}{(2n)! d\mu^n} \left\{ (\mu^2 - 1)^n \int_\mu^\infty \frac{d\mu}{(\mu^2 - 1)^{n+1}} \right\}$$

$$\text{and } \frac{dP_n(\mu)}{d\mu} \cdot \frac{dQ_{n+1}(\mu)}{d\mu} - \frac{dQ_n(\mu)}{d\mu} \cdot \frac{dP_{n+1}(\mu)}{d\mu} = \frac{n+1}{\mu^2 - 1}.$$



# M.A. AND M.Sc. EXAMINATIONS

11. Prove that

$$\int_{-1}^1 P_n^{(m)}(\mu) P_{n-1}^{(m)}(\mu) d\mu = 0, n \neq 1,$$

and 
$$\int_{-1}^1 \{P_n^{(m)}\}^2 d\mu = \frac{2}{2n+1} \cdot \frac{(n+m)!}{(n-m)!}.$$

Show also that

$$d P_n^{(m)}(\sigma) = \frac{1}{2} P_{n+1}^{(m)}(\sigma) - \frac{m\sigma}{2} P_n^{(m)}$$

12. Find the potential of a uniform circular disc at any point  $(r, \theta, \phi)$ .

Taking the axis of revolution as the axis of  $z$ , show that the potential of an ellipsoid of revolution of density  $\rho$  and semi-axes  $a, a, c$  at any point  $(r, \theta, \phi)$  outside the ellipsoid is

$$4\pi a^2 c \rho \sum_{n=0}^{\infty} \frac{(c^2 - a^2)^n}{(2n+1)(2n+3)} \frac{P_{2n}(\cos \theta)}{r^{2n+1}},$$

where  $r > (c^2 - a^2)^{\frac{1}{2}}$

## GROUP A

(THEORY OF FUNCTIONS OF A REAL VARIABLE—FIRST PAPER)

### SEVENTH PAPER

Examiners—{ PROF. GANESH PRASAD, M.A., D.Sc.  
MR. MANORANJAN GUPTA, M.Sc.

*The questions are of equal value*

*You are required to attempt the EIGHTH and NINTH questions ; full marks may be obtained by answering these and ANY FOUR of the remaining questions*

1. Enunciate the principles which Cantor postulates in defining (i) a real number, (ii) a transfinite ordinal number. Point out wherein they agree and differ.

Exhibit on the same finite segment of a straight line the transfinite ordinal numbers  $\omega$  and  $\omega^2$ .

2. Define an enumerable and a non-enumerable set. Give an example of a set which has a power higher than that of the continuum.

Prove the following :

If  $p, q, \dots, t$  denote a finite number of parameters each of which takes independently of the rest the values  $1, 2, 3, \dots, n, \dots$ , then the set formed of the elements  $u_p, q, \dots, t$  is enumerable.

If  $p, q, \dots, t, \dots$  denote an enumerably infinity of parameters each of which takes independently of the rest the values 0 and 1, then the set  $u_p, q, \dots, t, \dots$  is non-enumerable.

3. Prove that a non-dense perfect set has the power of the continuum.

$P$  is a point of Cantor's non-dense perfect set. Examine when  $P$  can be (i) rational, (ii) irrational.

4. Prove that the derivate of a set is closed. If

$$E^{(r)} \quad (r=1, 2, \dots, n, \dots)$$

denote the successive derivatives of a set  $E$ , of the *second species*, will the sets  $M(E^{(1)}, E^{(2)}, \dots, E^{(n)}, \dots)$  and  $D(E^{(1)}, E^{(2)}, \dots, E^{(n)}, \dots)$  be closed? How do you modify your answer when the sets  $E^{(r)}$  are any closed sets?

Obtain limiting points of the zeros of the function

$$\sin \left( \frac{\pi}{\sin \left( \frac{\pi}{\sin \frac{\pi}{x}} \right)} \right)$$

5. How does Borel define a bounded limiting set (*ensemble limite restreint*)? What are sets measurable ( $B$ )? Can you contemplate the existence of measurable sets which are not measurable ( $B$ )?

Prove the following :—

(i) A bounded limiting set is measurable.

(ii) If the exterior measure of a set  $E$  is  $k$ , there exists a set measurable ( $B$ ) which contains  $E$  and is of the same measure  $k$ .

6. Prove that a decreasing function of  $n$  tends to a finite limit or to  $-\infty$  as  $n$  tends to infinity. A sequence of numbers  $x_n$  is defined by

$$x_{n+1} = x_n^2 + k, \quad x_1 = h,$$

where  $0 < k < \frac{1}{4}$ . Prove that, if  $a < h < b$ , where  $a$  and  $b$  are roots of the equation

$$x^2 - x + k = 0,$$

then

$$a < x_{n+1} < x_n < b.$$

Determine the limit of  $x_n$  as  $n$  tends to infinity.

7. Starting from the definition of a derivate, prove that if, at all points of  $(a, b)$  with the exception of an enumerable set, the upper right derivatives of two continuous functions are finite and equal, then the functions differ by a constant.

8. Write an essay on continuous functions of a single variable  $x$  which are not differentiable for any value of  $x$ .

9. Prove any two of the following three theorems :—

(i) A monotone function is differentiable at almost all points

(ii) If  $F(x)$  denote

$$\int_0^x \cos \{ \psi(t) \} dt,$$

where  $\psi(t)$  is a monotone function which tends to infinity with  $t$  tending to 0, then  $F'(0)$  exists if

$$\lim_{t \rightarrow 0} \frac{\psi(t)}{\frac{1}{\log t^2}} \text{ is infinite.}$$

(iii) If

$$f(x, y) = x \sin \left( 4 \tan^{-1} \frac{y}{x} \right) \text{ for } x > 0,$$

and  $f(0, y) = 0$  for all values of  $y$ ; the relation

$$df = \frac{\partial f}{\partial x} dx + \frac{\partial f}{\partial y} dy$$

does not hold at the point  $(0, 0)$ .

10. (a) Classify discontinuous functions of a single variable, giving illustrative examples.

(b) Explain briefly the classification of functions which Baire introduced and based on the properties of the functions in relation to their representation as limits of sequences of functions.

## (THEORY OF FUNCTIONS OF A REAL VARIABLE—SECOND PAPER)

### EIGHTH PAPER

Examiners—{ MR. HARIPRASANNA BANERJEE, M.Sc.  
DR. LAKSHMI NARAYAN, M.A., D.Sc.

*The questions are of equal value*

*Full marks for ANY SIX questions*

1. Define the Lebesgue integral of a bounded function and shew that the Lebesgue integral

$$\int_E f(x) dx$$

exists if  $f(x)$  be measurable and bounded on the point set  $E$ .

For the function  $f(x) = \cos x$  for rational values of  $x$  and  $f(x) = x$  for irrational values, calculate the Lebesgue integral

$$\int_0^{\frac{\pi}{2}} f(x) dx.$$

2. State the definitions of Cauchy, Riemann, and Lebesgue of an Improper Integral.

Give an example of a function which has a Riemann Integral but not Lebesgue.

Explain what is meant by Cauchy's principal value of an Improper Integral.

3. If any one of the four derivatives of  $\phi(x)$  be bounded and integrable ( $R$ ), prove that the integral function corresponding to that derivative differs from  $\phi(x)$  by a constant only.

Give an example of a function with a bounded derivative at every point of a given interval, for which the theorem is not true.

4. Define a double  $R$ -integral.

Prove that if the bounded function  $f(x, y)$  has a double  $R$ -integral in the fundamental rectangle, the two repeated integrals exist and are each equal to the double integral.

Examine the function  $f(x, y)$ , where  $f(x, y) = \frac{1}{2}$  for all rational values of  $y$  and  $f(x, y) = x$  for all irrational values of  $y$ , for the equality of the two repeated integrals in

$$0 \leq x \leq 1, 0 \leq y \leq 1.$$

## 5. Given

$$F(y) = \int_{\phi_1(y)}^{\phi_2(y)} f(x, y) dx,$$

where  $f(x, y)$  and  $\frac{\partial f}{\partial y}$  are continuous in  $(x, y)$ ,  $a \leq x \leq b$ ,  $c \leq y \leq d$ , and

$\frac{d\phi_1}{dy}$ ,  $\frac{d\phi_2}{dy}$  exist, show that  $\frac{dF}{dy}$

Apply the formula for differentiation under the sign of integration to show that

$$\int_0^\infty e^{-x^2} \frac{1}{x^2} dx = \frac{\sqrt{\pi}}{2} e^{-2\alpha}.$$

6. Write an essay on the various modes of uniform convergence of infinite series of functions of a single variable indicating by means of illustrative examples, the advantages of each mode in deciding the question of continuity of the sum function and the validity of term by term integration.

7. Give *any* proof of Fourier's theorem for the expansion of a function  $f(x)$  in Fourier series, stating *carefully* the conditions you impose.

If

$$f(x) = \frac{1}{4}\pi x, 0 \leq x \leq \frac{1}{2}\pi$$

$$f(x) = \frac{1}{4}\pi(\pi - x), \frac{1}{2}\pi \leq x \leq \pi,$$

expand  $f(x)$  in sine series for the interval  $(0, \pi)$ .

## 8. State and prove Riesz-Fischer theorem.

9. Prove that the convergence of a Fourier series, corresponding to a function  $f(x)$ , at any given point  $\alpha$ , depends only on the nature of the function in an arbitrarily small neighbourhood of  $\alpha$ .

If  $f(x)$  satisfies the relation

$$f(\alpha + x) + f(\alpha - x) = \cos \log \frac{1}{x},$$

ascertain whether the Fourier series of  $f(x)$  converges or not at the point  $\alpha$ , giving all the steps of your reasoning in full.

10. Give an example of a continuous function, the Fourier series of which for  $0 \leq x < 2\pi$  is convergent at any point without exception but is not uniformly convergent in any subinterval of  $(0, 2\pi)$ . Give a clear and detailed proof of your statement.

11. If  $a$  is a point of discontinuity of the second kind of a function  $f(x)$  and

$$f(a+2x)+f(a-2x)=\chi(x)\cos\psi(x),$$

where  $\psi \sim \log \frac{1}{x}$  and  $\frac{\chi}{x\psi} \sim 1$ ,

prove that the Fourier series of  $f(x)$  is summable  $(c, 1)$  at  $a$ .

12. Prove that the Fourier series corresponding to a function  $f(x)$  defines the function  $f(x)$  uniquely and does not correspond to any different function  $\phi(x)$ .

## GROUP B

### (THEORY OF FUNCTIONS OF A COMPLEX VARIABLE—FIRST PAPER)

#### SEVENTH PAPER

Examiners— $\left\{ \begin{array}{l} \text{PROF. GANESH PRASAD, M.A., D.Sc.} \\ \text{MR. D. N. SEN, M.A.} \end{array} \right.$

*The questions are of equal value*

*You are required to attempt the SECOND and SIXTH questions ;  
full marks may be obtained by answering these and  
ANY FOUR of the remaining questions.*

1. (a) Explain what are meant by the *modulus* and *argument* (or *amplitude*) of a complex number, and how they are represented in the Argand diagram.

Prove that, if 
$$\frac{(1+z_1)(z_2-1)}{z_1-z_2}$$

is real, the four points 1,  $-1$ ,  $z_1$ ,  $z_2$  are concyclic.

(b) Give the geometrical meanings of the transformations

$$(i) \omega = z + c, (ii) \omega = cz, (iii) \omega = \frac{1}{z},$$

where  $\omega$  and  $z$  are complex variables and  $c$  is a complex constant.

2. Obtain in terms of properties of its real and imaginary parts,  $P(x, y)$ ,  $Q(x, y)$ , the precise significance of the differentiability of  $f(z)$  considered as a function of  $z$ , where  $z = x + iy$ .

Establish Cauchy's theorem for a rectangular contour under the condition that  $f(z)$  is continuous in  $z$  over the whole rectangle, boundary included, and differentiable in its interior.

If  $f'(z)$  does not always exist, indicate briefly how you will obtain inequalities for

$$\int_C f(z) dz$$

in terms of an integral of  $\overline{\omega}(z)$ , the lower bound, as  $\lambda$  takes all complex values, of the limit

$$\lim_{\zeta \rightarrow z} \left| \lambda - \frac{f(\zeta) - f(z)}{\zeta - z} \right|.$$

## 8. Prove carefully Morera's theorem.

Establish the theorem, if, for the continuity of  $f(z)$ , the equation

$$\int_C zf(z) dz = 0$$

is substituted.

4. Prove Laurent's theorem, that a uniform function  $f(z)$  regular (holomorphic) at every point of a neighbourhood of  $z=a$ , other than  $a$  itself, can be expanded in the form

$$f(z) = \sum_{n=-\infty}^{\infty} a_n(z-a)^n.$$

If  $f(z)$  is further known to be bounded in the neighbourhood of  $z=a$ , prove that  $f(z)$  must be regular at  $z=a$ .

In what other ways is it possible for a uniform function  $f(z)$  to behave in the neighbourhood of  $z=a$ ?

5. Apply contour integration to evaluate any two of the following :—

$$(i) \int_0^{\infty} \frac{x^{a-1} \log x \, dx}{1+x}, \quad 0 < a < 1;$$

$$(ii) \int_0^{\infty} \sin(x^2) \, dx;$$

$$(iii) \int_0^{\infty} \frac{\sin ax}{e^{2\pi x} - 1} \, dx.$$

6. Shew that, by the transformation

$$\frac{\omega - \alpha}{\omega - \beta} = K \cdot \frac{z - \alpha}{z - \beta},$$

a circle is changed into another circle. Prove that for all values of  $(\alpha, \beta)$ , the equation

$$\frac{(z - \alpha)(z_0 - \alpha)}{(z - \beta)(z_0 - \beta)} + A \cdot \frac{z - \alpha}{z - \beta} + A_0 \cdot \frac{z_0 - \alpha}{z_0 - \beta} + C = 0,$$

where  $z_0$  is the conjugate of  $z$  and  $A_0$  of  $A$ , represents a real circle if  $C$  is real and  $AA_0 - C > 0$ .

7. Write an essay on analytic functions having natural boundaries, enunciating one or two gap theorems for constructing such functions.

8. Shew that, if  $f(z)$  has no singularities in a domain  $D$ , the number of its zeroes lying within any simple closed curve  $C$  in  $D$  is given by

$$\frac{1}{2\pi i} \int_C \frac{f'(z) \, dz}{f(z)},$$

multiple zeroes being counted multiply.

Find how many zeroes the polynomial

$$z^{n+1}(z^n - 1) + 1$$

has in the portion

$$0 < \arg z < \frac{\pi}{n}$$

of the plane.

9. Define an *integral function* of the complex variable  $z$ .

Establish the theorem: If  $z_1, z_2, \dots, z_n, \dots$  be the zeroes of an integral transcendental function  $f(z)$ , where

$$\lim_{n \rightarrow \infty} z_n = \infty$$

and  $\sum_{n=1}^{\infty} \frac{1}{|z_n|}$  is convergent, then  $f(z)$  must be of the form

$$f(z) = ce^{G(z)} \prod_{n=1}^{\infty} \left(1 - \frac{z}{z_n}\right),$$

where  $c$  is a constant and  $G(z)$  denotes an integral function.

State (without proof) Weierstrass's generalization of the above theorem.

10. Prove any two of the following:—

$$(i) \quad \operatorname{cosec} z = \frac{1}{z} + \sum_{n=1}^{\infty} (-1)^n \left( \frac{1}{z-n\pi} + \frac{1}{n\pi} \right)$$

the summation extending to all positive and negative integral values of  $n$ , excluding zero.

(ii) If  $0 < a < 1$ ,

$$\frac{e^{a\pi} - 1}{e^{\pi} - 1} = \frac{1}{z} + \sum_{n=1}^{\infty} \frac{2z \cos 2n\pi - 4n\pi \sin 2n\pi}{z^2 + 4n^2\pi^2}.$$

$$(iii) \quad \coth z = \frac{1}{z} + 2z \left( \frac{1}{\pi^2 + z^2} + \frac{1}{4\pi^2 + z^2} + \frac{1}{9\pi^2 + z^2} + \dots \right).$$

## (THEORY OF FUNCTIONS OF A COMPLEX VARIABLE—SECOND PAPER)

### EIGHTH PAPER

Examiners— { MR. HARIPRASANNA BANERJEE, M.Sc.  
PROF. J. A. STRANG, M.A., B.Sc.

The questions are of equal value

Answer ANY SIX

1. A region  $G$  in the  $z$  plane is defined by the condition that if  $z = \zeta$  is any point of  $G$  the real part of each of the ratios  $\frac{a_r - \zeta}{a_r}$  is positive, where  $z = a_r$  ( $r=1, 2, \dots, n$ ) is a given set of points none of which coincides with the origin.

Describe the boundary of  $G$  when the number  $n$  is finite.

Show that when points  $z = a_r$  are the points of a continuous arc  $A$ , the boundary of  $G$  is formed by the corresponding arc of the first negative pedal of  $A$ , and the tangents at its ends, provided that the arc  $A$  fulfils a certain condition. What is the condition?

2. Write a brief account of the expansion of  $w=f(z)$  in powers of  $z-a$ , where  $a$  is any point of the  $z$  plane;  $f(z)$  being analytic except at an enumerable set of points  $z=b_1, \dots, b_r, \dots$ .

Prove the relation

$$(1+e^*)^{-1} = 2e^{-\frac{\pi}{2}} \left( \frac{\pi}{\pi^2+z^2} - \frac{3\pi}{3^2\pi^2+z^2} + \frac{5\pi}{5^2\pi^2+z^2} \dots \right).$$

Find the constant term in the expansion of  $(1+e^*)^{-1}$  in powers of  $z$ , valid in the ring space  $\pi < |z| < 3\pi$ .

3. Write a brief account of the Riemann surfaces which correspond to algebraic functions, and define the terms 'branch point,' 'order of a branch point,' and 'cross cut.'

Examine in detail the changes which occur in the function

$$w = \left( \frac{z-1}{z+1} \right)^{\frac{1}{3}} + z^{\frac{1}{3}}$$

when the  $z$  point describes repeatedly a closed curve enclosing  $z=0$  and  $z=1$  but not  $z=-1$ . After how many such circuits will the path of the  $w$  point be closed?

4. Utilise the theory of elliptic functions to prove the following properties of a non-unicursal cubic curve:—

(i) If six of the nine-points of intersection of two cubics lie on a conic, the other three are collinear; and conversely.

(ii) If a variable conic passes through four fixed points on the cubic, the chord of contact of the remaining two points of intersection passes through a fixed point on the cubic.

(iii) On every non-unicursal cubic there are just 27 points at which a non-degenerate osculating conic means the curve in 6 coincident points.

5. Prove the following theorems:—

(i) An elliptic function is at least of the second order.

(ii) The difference between the sum of the zeros and the sum of the poles of an elliptic function in a period parallelogram is equal to a period.

(iii) Between any two elliptic functions with the same periods there exists an algebraic relation.

6. (i) If  $f(u, v) = \frac{sn u \cdot cn v + sn v \cdot cn u}{dn u + dn v}$ , prove that  $\frac{\partial f}{\partial u} = \frac{\partial f}{\partial v}$ , and

hence show that

$$f(u, v) = \frac{sn(u+v)}{1+dn(u+v)}.$$

(ii) If  $E(u) = \int_0^u dn^2 z \cdot dz$ , show that

$$E(u+v) - E(u) - E(v) + k^2 sn u \cdot sn v \cdot sn(u+v) = 0.$$

7. Prove the following:—

(i)  $4\mathfrak{E}(2u) = \mathfrak{E}(u) + \mathfrak{E}(u+w_1) + \mathfrak{E}(u+w_2) + \mathfrak{E}(u+w_3)$ .

(ii) 
$$\begin{array}{ccc} 1 & \mathfrak{E}(u) & \mathfrak{E}'(u) \\ 1 & \mathfrak{E}(v) & \mathfrak{E}'(v) \\ 1 & \mathfrak{E}(w) & \mathfrak{E}'(w) \end{array}$$

$$= 2 \frac{\sigma(u+v+w) \cdot \sigma(u-v) \cdot \sigma(v-w) \cdot \sigma(w-u)}{\sigma^3 u \cdot \sigma^3 v \cdot \sigma^3 w},$$



8. Prove that to every system of values for the invariants  $g^2, g^3$  of Weierstrassian elliptic function (where  $g^2 \neq 27g^3$ ) there corresponds a pair of periods  $2\omega_1, 2\omega_2$ , whose ratio is not a real number; and conversely.

9. Show that every elliptic function can be expressed in terms of the theta functions, and in particular that

$$\eta(2K\tau) = \sqrt{\frac{k'}{k}} \frac{\mathfrak{S}_2(v)}{\mathfrak{S}_0(v)}.$$

10. State and prove Abel's theorem for integrals of the first kind. Deduce the addition theorem for  $\mathfrak{S}(z)$ .

## GROUP D

### (THEORY OF GROUPS—FIRST PAPER)

#### SEVENTH PAPER

Examiners—{ PROF. GANESH PRASAD, M.A., D.Sc.  
MR. MOHITMOHAN GHOSH, M.Sc.

Candidates are required to answer six questions only,  
one of which must be Question 8

1. Develop from first principles the theory of self-conjugate subgroups and their factor-groups, proving the two 'isomorphism theorems'.

$$(i) \frac{G/H}{K/H} = \frac{G}{K},$$

$$(ii) D/(D \wedge H) \cong (DH)/H,$$

where  $H$  and  $K$  are self-conjugate subgroups of  $G$ , ( $K$  containing  $H$ ), and  $D \wedge H$  is the common part of  $H$  and the arbitrary subgroup  $D$ .

2. Prove the following :—

(a) If  $st = su, t = u$ ;

(b) If  $s^2 = t^2 = 1, st$  is the inverse of  $ts$ ;

(c) If  $s^3 = t^3 = (st)^2 = 1, s$  and  $t$  are commutative;

(d) If  $sh, s^{-1} = h_1, h_2 = s^{-1}h_1s$ .

3. If

$$A = (a_{11}x_1 + a_{12}x_2 + \dots + a_{1m}x_m, a_{21}x_1 + a_{22}x_2 + \dots + a_{2m}x_m, \dots, a_{m1}x_1 + a_{m2}x_2 + \dots + a_{mm}x_m),$$

and

$$B = (b_{11}x_1 + b_{12}x_2 + \dots + b_{1m}x_m, b_{21}x_1 + b_{22}x_2 + \dots + b_{2m}x_m, \dots, b_{m1}x_1 + b_{m2}x_2 + \dots + b_{mm}x_m),$$

show that

$$AB = (c_{11}x_1 + c_{12}x_2 + \dots + c_{1m}x_m, c_{21}x_1 + c_{22}x_2 + \dots + c_{2m}x_m, \dots, c_{m1}x_1 + c_{m2}x_2 + \dots + c_{mm}x_m),$$

where

$$c_{ij} = b_{i1}a_{1j} + b_{i2}a_{2j} + b_{i3}a_{3j} + \dots + b_{im}a_{mj}.$$

Hence show that if  $AB \equiv C$ , the characteristic equation of  $A$  is

$$\begin{array}{ccccccc} \lambda b_{11} - c_{11} & \lambda b_{12} - c_{12} & \dots & \lambda b_{1m} - c_{1m} & & & \\ \lambda b_{21} - c_{21} & \lambda b_{22} - c_{22} & \dots & \lambda b_{2m} - c_{2m} & & & \\ \lambda b_{31} - c_{31} & \lambda b_{32} - c_{32} & \dots & \lambda b_{3m} - c_{3m} & & & \\ & & & & & & \\ \lambda b_{m1} - c_{m1} & \lambda b_{m2} - c_{m2} & \dots & \lambda b_{mm} - c_{mm} & & & \end{array} = 0.$$

$$\lambda b_{m1} - c_{m1} \quad \lambda b_{m2} - c_{m2} \quad \dots \quad \lambda b_{mm} - c_{mm} \quad |.$$

4. (a) Define a geometrical movement and establish the proposition: 'A figure can be brought into coincidence with any congruent figure by a translation followed by a rotation'.

(b) When are two figures said to be enantiomorphous? Show that a figure and its inverse about a point are enantiomorphous.

5. Define group and a subgroup, giving examples.

Show that :

(a) The order of a group is always divisible by the order of any of its subgroups.

(b) The order of every element in a group of order  $n$  is a factor of  $n$ .

(c) Every group of prime order is cyclic.

6. Define a transform and prove that—

(a) the transform of the product of any number of substitutions by  $s$  is the product of their transforms by  $s$ , (b) the transform of the inverse of  $A$  by  $s$  is the inverse of the transform of  $A$  by  $s$ .

If  $a$  is a permutation replacing 1 by  $f$  and 2 by  $s$ , show that

$$a^{-1}(12)a = (fs).$$

and hence prove that the symmetric group is the only primitive group containing a transposition.

7. (a) If  $G$  is an Abelian group of order  $p^n$  and type  $(1, 1, \dots, 1)$ , prove that the total number of subgroups of order  $p^r$  in  $G$  is

$$\frac{(p^n - 1)(p^{n-1} - 1)(p^{n-2} - 1) \dots (p^{n-r+1} - 1)}{(p^r - 1)(p^{r-1} - 1)(p^{r-2} - 1) \dots (p - 1)}.$$

(b) Define a Metabelian group and show that

$$a^3 = b^3 = 1, a^2b = ba^2, (ab)^2 = (ba)^2$$

is Metabelian.

8. If the substitution

$$x'_i = a_{i1}x_1 + a_{i2}x_2 + \dots + a_{im}x_m, \quad (i=1, 2, 3, \dots, m)$$

is orthogonal, show that

$$a_{i1}a_{j1} + a_{i2}a_{j2} + \dots + a_{im}a_{jm} = 0 \text{ if } i \neq j,$$

and

$$a_{i1}a_{i1} + a_{i2}a_{i2} + \dots + a_{im}a_{im} = 1 \text{ if } i = j.$$

State the geometric condition that two circles in the same plane may cut each other orthogonally and assuming that a similar criterion holds good in the Euclidean space of any dimension, prove that if the substitution

$$x'_t = a_t x_1 + b_t x_2 + c_t x_3 + d_t x_4 + e_t x_5 + f_t x_6 \quad (t=1, 2, 3, 4, 5, 6)$$

is orthogonal, in the Euclidean space of four dimensions any two of the six hyperspheres

$$(e_i + if_i)(x^2 + y^2 + z^2 + w^2) + 2R(a_i x + b_i y + c_i z + d_i w) + (-e_i^2 + f_i^2)R^2 = 0$$

will cut each other orthogonally, the co-ordinates of point in four-dimensional space being denoted by  $x, y, z$ , and  $w$  and  $i = \sqrt{-1}$ .

Enunciate the corresponding proposition relating to circles and find the orthogonal circles when the substitution (orthogonal) is

$$x'_1 = x_1 + \frac{1}{2}x_3 - \frac{i}{2}x_4,$$

$$x'_2 = x_2 + \frac{1}{2}x_3 - \frac{i}{2}x_4,$$

$$x'_3 = x_1 + x_2 - \frac{3}{4}x_3 - \frac{5i}{4}x_4,$$

$$x'_4 = ix_1 + ix_2 - \frac{i}{4}x_3 + \frac{7}{4}x_4.$$

9. Write an essay on the history and development of the theory of finite groups.

10. Obtain the relations due to Frobenius connecting the characters of the various irreducible representations of  $G$  with those of a given subgroup,  $H$ , of  $G$ . Illustrate these relations for the symmetric and alternating groups on three and four symbols. (The fundamental relations holding between the characters of the representation of one and the same group may be assumed.)

11. (a) Show that every finite homogeneous linear group has a positive Hermitian form as an invariant.

(b) Define a Hamiltonian group and show that the direct product  $G$  of an Abelian group  $A$  of odd order, an Abelian group  $B$  of order  $2^m$  and type  $(1, 1, \dots, 1)$  and the quaternion group  $C$  is Hamiltonian.

## (THEORY OF GROUPS—SECOND PAPER)

### EIGHTH PAPER

Examiners—{ PROF. GANESH PRASAD, M.A., D.Sc.  
MR. NARENDRAKUMAR MAJUMDAR, M.A.

*The questions are of equal value*

*You are requested to attempt the SEVENTH and TENTH questions;  
full marks may be obtained by answering these and  
ANY FOUR of the remaining questions*

1. (a) Given a Group  $G$  of substitutions on  $x_1, x_2, \dots, x_n$ , shew that a rational function  $\phi(x_1, x_2, \dots, x_n)$  belonging to  $G$  can be constructed.

(b) If  $\omega$  is a primitive  $\mu$ th root of unity, shew that

$$(x_1 + \omega x_2 + \omega^2 x_3 + \dots + \omega^{\mu-1} x_\mu)_\mu$$

belongs to the cyclic group

$$1 + a + a^2 + \dots + a^{\mu-1},$$

where

$$a \equiv (x_1 x_2 \dots x_\mu).$$

(c) If  $\phi$  belongs to  $G$  and  $\phi'$  belongs to  $G'$ , constants  $a$  and  $a'$  can be found such that  $a\phi + a'\phi'$  belongs to the greatest common sub-group of  $G$  and  $G'$ .

2. (a) Explain the scheme of Lagrange of solving by radicals the general equation of degree  $n$ .

(b) Prove that a necessary condition that the general equation of degree  $n$  shall be solvable by radicals under this scheme is that each group in the series shall be a *self-conjugate* sub-group of *prime* index under the preceding group.

(c) Give an illustration to show that the *necessary* condition so obtained is not a *sufficient* one.

3. Shew that the symmetric group on  $n$  (greater than 4) letters contains no self-conjugate sub-group besides itself, the identity  $G_1$  and the alternating group  $G_{1,n}$ , so that the latter is the only maximal self-conjugate sub-group of  $G_{1,n}$  ( $n > 4$ ).

4. (a) Find the group  $G$  of a reciprocal quartic equation :

$$x^4 + ax^3 + bx^2 + ax + 1 = 0$$

for the domain  $R(a, b)$ , when it is irreducible in this domain.

(b) Deduce that the groups of the equations :

$$x^4 + 1 = 0 \text{ and } x^4 + x^3 + x^2 + x + 1 = 0$$

are

$$G_4 \equiv 1 + (12)(34) + (13)(24) + (14)(23),$$

and

$$C_4 \equiv 1 + (1234) + (13)(24) + (1432)$$

respectively.

5. (a) Shew that by the adjunction of any one root of an Abelian equation of prime degree  $p$ , the group of a second given equation either is not reduced at all or else is reduced to a self-conjugate sub-group of index  $p$ .

(b) Prove that if the group of an equation  $F_1(x) = 0$  for a domain  $R$  is reduced by the adjunction of all the roots of an equation  $F_2(x) = 0$  whose group for  $R$  is simple, then all the roots of  $F_2(x) = 0$  are rational functions in  $R$  of the roots of  $F_1(x) = 0$ .

6. (a) Prove that, if  $L$  is a self-conjugate sub-group of  $K$  of prime index  $v$  and if  $k$  is any substitution of  $K$  not contained in  $L$ , then  $k^v$  and no lower power of  $k$ , belongs to  $L$ , and the period of  $k$  is divisible by  $v$ .

(b) Hence or otherwise prove that every irreducible equation of prime degree  $p$  which is solvable by radicals is a Galoisian equation.

7. (a) Prove that a proposed construction by ruler and compasses is possible if and only if the numbers which define analytically the desired geometrical elements can be derived from those defining the given elements by rational operations and extractions of real square roots performed a finite number of times.

(b) Shew that any angle cannot be trisected by ruler and compasses. Can a given angle other than right be trisected by any other method?

(c) Can you construct a regular polygon of 11 sides by ruler and compasses? Give full reasons for your answer.

8. Prove that the equation for the abscissae of the nine points of inflexion of a cubic curve is solvable by radicals.

9. Find the Galoisian group, for two selected domains, of each of the two equations :

(i)  $x^3 - 2 = 0$

(ii)  $x^4 + 6x^2 + 1 = 0$ .

10. Prove that the Bring-Jerrard normal form

$$x^5 + px + q = 0$$

of the general quintic has a resolvent sextic

$$(\phi^3 - 5p\phi^2 + 15p^2\phi + 5p^3)^2 = \Delta\phi$$

for the metacyclic group.

11. Give and account of Gauss's method of reducing the solution of the equation,

$$x^p = 1,$$

where  $p$  is a prime, to the solution of a succession of equations of lower degree.

Carry out the process in the case  $p = 13$ , and shew that

$$\sin \frac{2\pi}{13} - \sin \frac{5\pi}{13} + \sin \frac{6\pi}{13} = \frac{1}{2} \sqrt{\left\{ \frac{13 - 3\sqrt{13}}{2} \right\}},$$

$$\sin \frac{\pi}{13} + \sin \frac{3\pi}{13} + \sin \frac{4\pi}{13} = \frac{1}{2} \sqrt{\left\{ \frac{13 + 3\sqrt{13}}{2} \right\}}.$$

(GROUP E)

(FINITE DIFFERENCES—FIRST PAPER)

SEVENTH PAPER

Examiners—{MR. P. L. GANGULY, M.A., B.L.  
PROF. J. A. STRANG, M.A., B.Sc.

*The questions are of equal value*

*Full marks for ANY SIX questions which must include the TENTH question*

1. Shew that

$$(a) \int_0^{\infty} e^{-ax}(e^{-x}-1)^n x^{n-1} dx = a\Gamma\Delta^n n^{-a},$$

$n$  and  $a$  being positive quantities.

(b) Demonstrate the formula

$$\Delta^n 1^{p+1} = (n+1)\Delta^n 1^p + n\Delta^{n-1} 1^p.$$

2. (a) Shew that  $\cot^{-1}(p+qn+rn^2)$  is integrable in finite terms whenever  $q^2 - r^2 = 4(pr-1)$ .

(b) Sum the following series to  $n$  terms :

$$(i) \frac{10}{1 \cdot 3 \cdot 5} + \frac{12}{3 \cdot 5 \cdot 7} + \frac{14}{5 \cdot 7 \cdot 9} + \dots$$

$$(ii) \frac{1}{\sin \theta} + \frac{1}{\sin 2\theta} + \frac{1}{\sin 4\theta} + \dots$$

8. (a) If the function  $\phi(x)$  be positive in sign but diminishing in value as  $x$  varies continuously from  $a$  to  $\infty$ , then prove that the series

$$\phi(a) + \phi(a+1) + \phi(a+2) + \dots \text{ad inf} \dots$$

will be convergent or divergent according as

$$\int_a^\infty \phi(x) dx$$

is finite or infinite.

(b) Obtain De Morgan's criteria for testing the convergency of infinite series.

4. (a) Prove Newton's formula for unequal intervals :

$$f(u) = f(a_0) + (u-a_0)f(a_0, a_1) + (u-a_0)(u-a_1)f(a_0, a_1, a_2) \dots \\ + (u-a_0)(u-a_1) \dots (u-a_{n-1})f(a_0, a_1, \dots, a_n)$$

(b) The first six terms of a series are 12, 40, 90, 168, 280, 432. Find the general term of the series by forming a difference table and then using the Newton-Gregory formula of interpolation. Hence find the sum of  $n$  terms.

5. Prove by induction or otherwise that if  $Q$  denotes the operator  $\Delta E$ , and  $u_x$  is a polynomial of degree  $n$  in  $x$ , then

$$u_x = u_0 + c_1 \cdot Q u_0 + c_2 \cdot Q^2 u_0 + \dots + c_r \cdot Q^r u_0 + \dots,$$

where  $c_r = Q^{-r} 1$ , and the 'constants of integration' in the coefficients  $c_r$  are so determined that  $c_r = 0$  when  $x = 0$ .

6. Obtain a generating function for the expression

$$P_n = \frac{1}{1 \cdot n} + \frac{1}{2(n \cdot 1)} + \dots + \frac{1}{n \cdot 1},$$

and hence show that

$$(i) D^2 = P_1 \Delta^2 - P_2 \Delta^3 + P_3 \Delta^4 - \dots$$

$$(ii) 2D = E(2P_1 \Delta - 3P_2 \Delta^2 + 4P_3 \Delta^3 - \dots)$$

7. Determine the function  $f(x)$ , where

$x$	7	9	10	13	15	16
$f(x)$	-1601	-1181	-890	879	1615	2368

and find the value of  $f'(7)$

(i) by using a difference formula,

(ii) direct from the function by differentiation.

8. Use any suitable interpolation formula to supply the missing data in the following table, the missing number in the left column being computed to four decimal places :—

$x$	$f(x)$
12.0	.20736
12.5	.24414
..	.28000
13.0	.28561
13.5	.33215
13.7	....
14.0	.38416
14.5	.44207

9. Obtain the Euler Maclaurin sum formula, and use it to show that if

$$u = (n+1)^{n+1} (n+2)^{n+1} \dots (2n)^{2n},$$

and

$$v = 2^{2n^2} + n + \frac{1}{12} \cdot \frac{1}{n} n(3n+1) \cdot e^{-\frac{1}{2}n^2},$$

then

$$\lim_{n \rightarrow \infty} \frac{L}{v} = 1.$$

10. Prove Gauss's theorem that the calculation of

$$\int_{-1}^1 f(x) dx,$$

where  $f(x)$  is a polynomial of degree  $(2n+1)$ , can be effected by substituting for  $f(x)$  a suitably chosen polynomial of degree  $n$  at most.

Verify that if  $f(x)$  is a quintic

$$\int_{-1}^1 f(x) dx = \frac{5}{9} \left[ f\left(-\sqrt{\frac{3}{5}}\right) + f\left(+\sqrt{\frac{3}{5}}\right) \right] + \frac{8}{9} f(0).$$

## (THEORY OF FINITE DIFFERENCES—SECOND PAPER)

### EIGHTH PAPER

Examiners— { MR. NARENDRA KUMAR MAJUMDAR, M.A.  
DR. GORAKH PRASAD, M.A., D.Sc.

*The questions are of equal value*

*Full marks for any six questions*

1. Solve any three of the following equations :—

(a)  $u_{x+1} - pa^{x+1}u_x = qa^{x^2}.$

(b)  $2y(x+3) - 5y(x+2) + y(x+1) + 2y(x) = 0.$

(c)  $u = x \Delta u + (\Delta u)^2.$

(Determine complete primitive and indirect integrals)

(d)  $u_{x+3} - a(a^x + 1)u_{x+1} + a^{x+1}u_x = 0.$

2. (a) Define a *fundamental system* of solutions of a homogeneous linear difference equation.

(b) Determine the coefficients of a linear homogeneous difference equation in terms of a fundamental system of solutions.

(c) Prove that a homogeneous linear difference equation of the  $n$ th order, which has more than  $n$  linearly independent solutions, is an identity.

3. (a) Define a manifold solution of a linear homogeneous difference equation.

(b) Prove that, if a homogeneous linear difference equation of order  $n$  possess one and only one  $\lambda$ -fold solution, this can be obtained by a single quadrature; and the equation reduces to a homogeneous linear difference equation of order  $(n-\lambda)$ .

(c) Hence or otherwise solve :—

$$(E-a)^2(E-b)y_x=0.$$

4. Solve any three of the following equations :—

$$(a) \begin{cases} u_{x+2}+2v_{x+1}-8u_x=a^x \\ v_{x+2}-u_{x+1}-2v_x=a^{-x} \end{cases}.$$

$$(b) \frac{\psi x}{\psi x-x}+x \frac{\psi(1-x)}{\psi(1-x)+x-1}=1.$$

$$(c) \phi(x+y)+\phi(x-y)=\phi(x) \cdot \phi(y).$$

$$(d) u_{x+2}u_{x+1}u_x=a(u_{x+2}+u_{x+1}+u_x).$$

5. (a) Prove that

$$\pi(\pi-1) \dots (\pi-n+1)y=x(x+\Delta x) \dots (x+\overline{n-1}\Delta x)\left(\frac{\Delta}{\Delta x}\right)^ny,$$

$$\text{where } \pi \equiv x \frac{\Delta}{\Delta x}.$$

(b) Solve :—

$$x(x+1)\Delta^2y_x+x\Delta y_x-n^2y_x=0.$$

6. (a) Define the *derivative* of a function with respect to another function. Prove that the successive functions of the derivatives of a function are the corresponding derivatives of the iteratives of that function.

(b) Hence or otherwise find the  $r$ th successive function of  $ax^b$ , and find the condition that this function should be a periodic function of the  $n$ th order.

7. (a) Find the general term of the Schimperian series (the numbers of Fibonacci) : (0, 1, 1, 2, 3, 5, 8, . . . . .) where each term is the sum of the two preceding.

(b) Form the equation of the curve such that the product of the two intercepts by the curve of a straight line drawn through a fixed point may be constant.

8. Find the formal power series solutions of the linear homogeneous difference equation of the second order with linear coefficients.

Show how to find the equivalent matrix equation and the matrix of power series which formally satisfies it.

9. If  $X_1, X_2, \dots, X_n$  are  $n$  uncorrelated variables obeying the normal law, and in  $a_1, a_2, \dots, a_n$  are constants, prove that  $a_1X_1+a_2X_2+\dots+a_nX_n$  will also obey the normal law.

The gross weights of a number of boxes and their contents are grouped about a mean  $w$  with a standard deviation  $\sigma$ . If the average weight of the empty boxes is  $w_1$  and the standard deviation from the mean is  $\sigma_1$ , find the average weight of the contents of a box and the corresponding standard deviation.



10. A curve, whose differential equation is of the form

$$\frac{dy}{dx} = \frac{y'(x+b)}{px^2+qx+r},$$

has to fit a given frequency distribution. Express  $p, q, r, b$  and the 'skewness' in terms of the moments of the given frequency distribution.

In the case when  $q^2/4pr$  is positive and greater than 1, show that the equation to the curve is of the form

$$y = y_0(x-a)^{r/2}x^{-r/2}$$

and that the  $n$ th moment about the origin of the distribution given by this curve is

$$a^n \Gamma(q_1 - q_2 - 1 - n) \Gamma(q_1) / \Gamma(q_1 - n) \Gamma(q_2 - 1).$$

11. Write a short essay on the theory of sampling, dealing in particular with (i) the correlation between the frequencies in any two groups of a sample distribution, (ii) the probable error of the mean of a sample of  $n$  observations, and (iii) the standard deviation of the frequency distribution observed in the  $k$ th group.

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(GROUP H)

#### SEVENTH PAPER

Examiners—{MR. SATISCHANDRA GHOSH, M.A.  
MR. M. N. RAY, M.A., B.L.

(VECTOR ANALYSIS AND QUATERNIONS—FIRST PAPER)

*The questions are of equal value*

*Attempt ANY SIX questions*

1. Prove that the product of the conjugates of any number of quaternions is the conjugate of their product in reverse order.

Prove that

$$Va\beta\gamma = aS\beta\gamma - \beta S\gamma\alpha + \gamma S\alpha\beta.$$

If three vectors satisfy the relation  $(a\beta\gamma)^2 = -a^2\beta^2\gamma^2$ , prove they are mutually at right angles.

2. If  $A, B, C$  are the supplements of the angles between the pairs of vectors  $\beta', \gamma'; \gamma', \alpha'; \alpha', \beta'$ , deduce the relation

$$\frac{2A}{\alpha} \frac{2B}{\beta} \frac{2C}{\gamma} = -1.$$

Show that this equation may be transformed into

$$e^{A\alpha} \cdot e^{B\beta} \cdot e^{C\gamma} = -1.$$

Examine whether it may be further simplified to

$$e^{A\alpha + B\beta + C\gamma} = -1,$$

and carefully state your reason.

3. Show that the equations

$$SU \frac{\rho}{\alpha} = SU \frac{\beta}{\alpha}, \quad SU \frac{\rho}{\alpha} = -SU \frac{\beta}{\alpha}$$

represent the two sheets of the cone of revolution, with  $O$  for vertex,  $OA$  for axis, and passing through the point  $B$ .

Given three points  $A, B, C$ , show that the three equations

$$S(\rho - \alpha)(\beta - \gamma) = 0$$

$$S(\rho - \beta)(\gamma - \alpha) = 0$$

$$S(\rho - \gamma)(\alpha - \beta) = 0$$

represent a line which is the locus of the fourth vertex  $D$  of a tetrahedron  $ABCD$  enjoying the property that perpendiculars from the vertices on the opposite faces concur.

4. Prove that the equation

$$V\rho\alpha V\beta\rho = (V\alpha\beta)^2$$

presents a plane curve—a hyperbola of which  $\alpha$  and  $\beta$  are the asymptotes.

If  $\phi(t)$  is a function of a single parameter, prove that the equation

$$\rho = \phi(t) + u\phi'(t)$$

presents a developable surface.

Prove that the equation

$$\rho = \phi(t) + u\alpha$$

in which  $\alpha$  is a constant vector, represents a cylinder standing on the curve  $\rho = \phi(t)$  and having its generators parallel to  $\alpha$ .

5. Define  $\nabla$  by the relation

$$dP = -S\nabla P d\rho,$$

prove

$$\nabla T(\rho - \alpha)^{-1} = -U(\rho - \alpha) \cdot T(\rho - \alpha)^{-2}.$$

If  $f_n(\rho)$  is any homogeneous function of  $\rho$  of the order  $n$  which vanishes under the operation of  $\nabla^2$ , prove that the function

$$T\rho^{-2n-1} \cdot f_n(\rho)$$

will vanish under the same operator.

6. (i) Define the differential of a function of a quaternion.

(ii) Show that

$$d \cdot e^q = \left( Sdq + S \frac{Vdq}{Vq} \cdot Vq \right) e^q + V \cdot \frac{Vdq}{Vq} \cdot Ve^q.$$

What simplification would ensue if  $dq$  is coplanar with  $q$ ?

7. Prove that

$$(i) \quad \nabla TV\alpha\rho = +UV\alpha\rho \cdot \alpha.$$

$$(ii) \quad S\beta\nabla S\alpha\nabla \cdot T\rho^{-1} = 3S\alpha\rho S\beta\rho \cdot T\rho^{-2} + S\alpha\beta \cdot T\rho^{-2}.$$

8. (i) Investigate the rate of rotation of the osculating plane as we pass along a given curve.

(ii) Calculate the vector  $\omega$  (the vector twist) for the helix

$$\vec{w} = a(i \cos t + j \sin t) + kbt,$$

$i, j$ , and  $k$  being mutually rectangular unit vectors.

9. (i) Show that

$$\nabla \cdot q = \nabla S q + S \nabla q + V \nabla V q$$

(ii) If a scalar function  $P$  of a scalar function  $u$  of  $\rho$  can be found to satisfy  $\nabla^2 P = 0$ , shew that

$$V \nabla u \nabla \cdot \frac{\nabla^2 u}{(\nabla u)^2} = 0.$$

10. (i) Find the self-conjugate part of the function

$$\phi \rho = \alpha' S \alpha \rho + \beta' S \beta \rho + \gamma' S \gamma \rho$$

and also its spin vector.

(\*) Two axes of a function are at right angles. Show that the spin vector lies in their plane.

11. (i) Show that in every homogeneous strain one direction at least remains unchanged.

(ii) Show that the strain produced by two successive pure strains is generally impure.

## (VECTOR ANALYSIS AND QUATERNIONS—SECOND PAPER)

### EIGHTH PAPER

Examiners—{ DR. HARIDAS BAGCHI, M.A., PH.D.  
MR. D. P. BHATTACHARYA, M.A.

*The questions are of equal value*

*Attempt ANY SIX questions*

1. Adopting the usual definition of  $e^q$ , viz.

$$e^q = 1 + q + \frac{q^2}{2!} + \dots + \frac{q^n}{n!} + \dots,$$

(where  $q$  is a quaternion), establish the undermentioned equalities :—

$$(i) \quad K(e^q) = e^{Kq},$$

$$(ii) \quad T(e^q) = e^{Sq},$$

$$(iii) \quad U(e^q) = \cos(TVq) + UVq \cdot \sin(TVq),$$

Set  $q = \rho^{\frac{1}{2}}$ , (where  $\rho$  is a vector of tensor  $\frac{\pi^2}{8}$ ), and substantiate the result :—

$$e^q \equiv e^{\rho^{\frac{1}{2}}} = \frac{e^{\rho}}{\sqrt{2}} \cdot (1 + U\rho).$$

[N.B.—Remember the formula :

$$\rho^n = (T\rho)^n \left[ \cos \frac{n\pi}{2} + U\rho \cdot \sin \frac{n\pi}{2} \right],$$

where  $\rho$  is a vector and  $n$  a scalar].

2. (i) Show how to express the general equation of a sphere in the form :

$$\rho^2 - 2S \cdot \lambda \rho + l = 0,$$

(where  $\lambda$  and  $l$  are respectively a vector constant and a scalar constant).

From the origin  $O$   $n$  vectors  $a_1, a_2, a_3, \dots \dots a_n$ , are drawn terminating at the points  $A_1, A_2, A_3, \dots \dots A_n$  respectively. Prove that the locus of a variable point  $P$ , which reforms to the relation

$$PA_1^2 + PA_2^2 + PA_3^2 + \dots \dots + PA_n^2 = \text{const. } (c^2),$$

is the sphere

$$\rho^2 - 2S\lambda\rho + l = 0,$$

where

$$\lambda \equiv \frac{1}{n} (a_1 + a_2 + a_3 + \dots \dots + a_n),$$

and

$$l \equiv \frac{1}{n} (a_1^2 + a_2^2 + a_3^2 + \dots \dots + a_n^2 + c^2).$$

(ii) Verify that the scalar equation

$$T(q\rho q^{-1}) = \text{const.},$$

(where  $q$  is a quaternionic constant), denotes a sphere, and determine its centre.

3. Prove that the equation

$$(S\alpha\rho)^2 + 4(S\beta\rho)^2 - 9(S\gamma\rho)^2 = 1$$

defines a hyperboloid of one sheet, of which the two systems of generators are given by

$$\left. \begin{aligned} S \cdot (\alpha + 3\gamma)\rho &= a(1 + 2S\beta\rho), \\ S \cdot (\alpha - 3\gamma)\rho &= \frac{1}{a} (1 - 2S\beta\rho), \end{aligned} \right\}$$

and

$$\left. \begin{aligned} S \cdot (\alpha + 3\gamma)\rho &= b(1 - 2S\beta\rho), \\ S \cdot (\alpha - 3\gamma)\rho &= \frac{1}{b} (1 + 2S\beta\rho), \end{aligned} \right\}$$

where  $a$  and  $b$  are the attached scalar parameters.

4. Point out clearly how the parametric equation :

$$\rho = \alpha \cos ct + \beta \sin ct$$

represents an ellipse, having the origin for its centre, and  $\alpha, \beta$  for a pair of conjugate semi-diameters.

Eliminate the vector constants  $\alpha, \beta$  by process of differentiation and derive the differential relation :

$$\frac{d^2\rho}{dt^2} + c^2\rho = 0.$$

Deduce or prove otherwise that the path of a particle is always a conic, having its centre at the centre of force, whenever the law of force (supposed attractive) is that of direct distance.

5. A rigid body is in equilibrium under the action of a set of forces ( $\beta_1, \beta_2, \beta_3, \dots \dots \beta_n$ ), having for their points of application the extremities of the vectors ( $\alpha_1, \alpha_2, \alpha_3, \dots \dots \alpha_n$ ), all drawn from the origin. Obtain the vector relations :

$$\Sigma\beta = 0 \text{ and } \Sigma V\alpha\beta = 0,$$

and deduce or prove directly that the two linear vector functions

$$\phi\rho \equiv \Sigma\alpha S\beta\rho \equiv \alpha_1 S\beta_1\rho + \alpha_2 S\beta_2\rho + \dots \dots + \alpha_n S\beta_n\rho$$

and

$$\theta\rho \equiv \Sigma\beta S\alpha\rho \equiv \beta_1 S\alpha_1\rho + \beta_2 S\alpha_2\rho + \dots \dots + \beta_n S\alpha_n\rho$$

possess a common triad of axes, which are mutually orthogonal. What is the exact relation between  $\phi\rho$  and  $\theta\rho$ ?

6. If  $A, B, C, D$  are any four points in a plane and  $\alpha, \beta, \gamma, \delta$  are the vectors to these points drawn from an arbitrary origin  $O$ , show that it is possible to find scalars  $a, b, c, d$  so that

$$a\alpha + b\beta + c\gamma + d\delta = 0,$$

where

$$a + b + c + d = 0.$$

Prove also that if  $BC$  and  $AD$  meet in the point  $E$ , the vector

$$OE = \frac{b\beta + c\gamma}{b+c} = \frac{a\alpha + d\delta}{a+d}$$

Find similarly the vectors to the points of intersection of  $CA, BD$  and  $AB, CD$ . Hence establish the harmonic property of the complete quadrilateral, viz., that each diagonal is divided harmonically by the other two.

7. Define a *linear vector function* and show that if  $\phi$  denotes such a function, then  $V\phi\alpha\phi\beta$  is a linear vector function of  $V\alpha\beta$ .

Obtain Hamilton's solution of the linear vector equation  $\sigma = \phi\rho$  in the form  $m\rho = \psi\sigma$ . Carry out the process in the case of the equation

$$\sigma = \phi\rho \equiv \alpha S\lambda\rho + \beta S\mu\rho + \gamma S\nu\rho,$$

where  $\alpha, \beta, \gamma$  and  $\lambda, \mu, \nu$  are two sets of non-coplanar vectors and obtain an explicit expression of  $\rho$  in terms of  $\sigma$ .

8. Find the equation of the normal to the quadric surface  $S\rho\phi\rho = -1$  at the extremity of the vector  $\alpha$ .

Show that the elimination of  $\rho$  between the equations

$$\beta = \rho + t\phi\rho, S\rho\phi\rho = -1$$

leads to an equation of the sixth degree in  $t$  and explain how your result determines the number of normals that can be drawn from a given point to the quadric  $S\rho\phi\rho = -1$ .

Prove also that the feet of these normals are given by the intersection of the quadric with a twisted cubic.

9. Explain the geometrical representation as a curve and a surface respectively of the vector equations

$$\rho = f(t) \text{ and } \rho = F(t, u),$$

where  $t$  and  $u$  are scalar variables.

For the curve 
$$\rho = ct\alpha + a'\beta,$$

where  $\alpha$  is a given unit vector and  $\beta$  another vector perpendicular to  $\alpha$ ,

calculate  $\frac{d\rho}{dt}$  and show that

(i) the perpendicular distance of any point  $P$  on the curve from  $\alpha$  is constant,

(ii) the tangent at  $P$  makes a constant angle with  $\alpha$ .

Hence identify the curve as a helix with its axis along  $\alpha$ .

Prove also that the locus of the perpendiculars to the axis which intersect the curve is the surface given by the equation

$$\rho = ct\alpha + ua'\beta,$$

where  $u$  is a variable scalar.

10. Define the operator  $\nabla$  and show that if  $P$  is a scalar function of  $\rho$ , then  $\nabla^2 P$  is a scalar.

Establish the following results :—

$$(i) \quad \nabla U\rho = -\frac{2}{T\rho},$$

$$(ii) \quad \nabla \frac{1}{T\rho} = -\frac{U\rho}{T\rho^2},$$

$$\text{and} \quad (iii) \quad \int \frac{V\rho d\rho}{T\rho^3} = - \int S d\nu \nabla \cdot \nabla T\rho^{-1},$$

indicating the limitations, if any.

### GROUP F

#### (MODERN GEOMETRY—FIRST PAPER)

#### SEVENTH PAPER

Examiners—{ PROF. SYAMADAS MUKHERJEE, M.A., PH.D.  
MR. MOHITMOHAN GHOSH, M.Sc.

*The questions are of equal value*

*Full marks for SIX questions, one of which must be the NINTH question*

1. Prove the theorem of Desargues :

If two triangles  $ABC$  and  $A'B'C'$  in different planes be such that  $AA'$ ,  $BB'$ ,  $CC'$  meet in a point  $O$ , then the corresponding straight lines  $AB$  and  $A'B'$ ,  $AC$  and  $A'C'$ ,  $BC$  and  $B'C'$  meet in three collinear points.

Extend the theorem to two triangles lying in the same plane.

2. Shew that the an harmonic ratio of four collinear points is unaltered by any projection whatsoever.

Shew that if two ranges  $ABCD$ ,  $A'B'C'D'$ , each of four points, are equianharmonic, they are projective with one another.

3. Shew that two quadrangles  $ABCD$  and  $A'B'C'D'$  are always projective.

If two quadrangles (lying in different planes) have a pair of their vertices coincident, shew that only two projections will suffice to pass from one to the other.

4. Define a harmonic range and apply the principle of duality to obtain a corresponding definition of a harmonic pencil.

If from any point  $S$ , the harmonic range  $ABCD$  be projected upon any other straight line, prove, from your definitions, that its projection will also be a harmonic range.

5. Given a parallelogram  $ABCD$  and a point  $P$  in its plane, draw through  $P$  a parallel to a given straight line  $EF$ , lying in the same plane, making use of the ruler only.

Given a circle and its centre, draw a perpendicular to a given straight line, making use of the ruler only.

6. Prove the theorem of Pascal :

If a hexagon  $AB'CA'BC'$  is inscribed in a conic, the three pairs of opposite sides intersect one another in three collinear points  $P, Q, R$ .

Shew that Pascal's Theorem expresses the necessary and sufficient condition that six points on a plane may be on a conic.

7. Two concentric projective pencils are given, which are determined by three pairs of corresponding rays. Construct their self-corresponding rays.

$A$  and  $A'$ ,  $B$  and  $B'$  are two given pairs of conjugates of an involution of points on a straight line. Construct the double points of the involution.

8. If two complete quadrangles have the same diagonal points, shew that their eight vertices lie either four and four on two straight lines or else they all lie on a conic.

State the theorem correlative to the above theorem.

9. Prove, by help of Hilbert's axioms of order, that—

(i) Between any two points  $A$  and  $C$ , on a straight line, there are an infinite number of points;

(ii) On the straight line  $AC$  produced towards  $C$ , there are an infinite number of points.

10. Into how many groups does Hilbert divide his axioms? Name these groups and point out which group or groups are excluded in projective geometry.

Shew that Desargues' theorem relating to two triangles in the same plane is impossible to prove by help of the *plane* axioms of projective geometry alone.

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## MODERN GEOMETRY—SECOND PAPER

### EIGHTH PAPER

Examiners— { DR. INDUBHUSHAN BRAHMACHARI, M.A., PH.D.  
MR. HARENDRANATH DATTA, M.Sc

*The questions are of equal value*

*Full marks for ANY SIX questions which include the NINTH question*

1. Show that of the 24 cross-ratios that can be formed out of four given points of a row, only six have different values. Show also that each of these six can be expressed in terms of any one of them.

2. Prove that if  $ABC \dots MN$  and  $A'B'C' \dots M'N'$  be two coplanar projective ranges, every pair of straight lines such as  $MN'$  and  $M'N$  intersect in points lying on a fixed straight line; and state its correlative theorem.

3. If two one-dimensional geometric forms (each consisting of four elements) are projective, they are equianharmonic; and if they are equianharmonic, they are projective.

Given two collinear segments  $AB$  and  $A'B'$ ; to determine another segment  $CD$  which shall divide each of them harmonically.

4. Show that an involution is determined by two pairs of conjugate elements.

If a complete quadrangle move in such a way that five of its sides pass each through one of five fixed collinear points, then its sixth side will also pass through a fixed point collinear with the other five and forming an involution with them.

5. When is a given range  $ACBD$  said to be harmonic in Projective Geometry? Show that the harmonic property is independent of the subsidiary complete quadrilaterals.

Given  $ABCDACBAD$ , prove that  $A, C$  are harmonic conjugates with respect to  $B, D$ .

6. When are two points  $A$  and  $B$  said to be conjugate with respect to a given conic?

Let  $ABC$  be any triangle inscribed in a conic and  $S$  the pole of  $BC$ ; then any line through  $S$  meets  $AB$  and  $AC$  in conjugate points. To whom is the theorem ascribed?

7. Given two conics  $k, k'$ , it is required to construct the projectivity

$$\{A'B'C' \dots\} = \omega\{ABC \dots\}$$

from the three given pairs of corresponding points  $(A, A')$ , etc., where  $ABC$  is any triad on  $k$  and  $A'B'C'$  any triad on  $k'$ ; and prove that if  $P, Q'$  be any two points on two projective conics

$$\{ABC \dots\}, \{A'B'C' \dots\};$$

then the pencils

$$P\{ABC \dots\}, Q'\{A'B'C' \dots\}$$

are projective.

8. Write a short note on ruled quadrics, their generation and sections, etc.

9. Show how an involution range can be completely determined on any given base by means of a system of coaxial circles, indicating the distinction between a hyperbolic and an elliptic involution.

Deduce Desargues' Theorem by generalisation.

10. Prove that the circle circumscribing any triangle which is self-conjugate with regard to a conic is cut orthogonally by the director circle.

Hence or directly prove the following:—

(1) The centre of the circle circumscribing any triangle self-conjugate with regard to a parabola lies on the directrix.

(2) The circle circumscribing any triangle self-conjugate with regard to an equilateral hyperbola passes through the centre of the conic.

## GROUP G

### (NON-EUCLIDEAN GEOMETRY—FIRST PAPER)

#### SEVENTH PAPER

Examiners—{ PROF. SYAMADAS MUKHERJEE, M.A., PH.D.  
,, GANESH PRASAD, M.A., D.SC.

Full marks may be obtained by answering the FIRST and TENTH questions, which you must attempt, and ANY FOUR of the remaining questions

1. Contrast the geometry on a surface of negative curvature with that on a plane and on a sphere, with special reference to the bearing on the axioms of Euclidean Geometry.

2. Prove, after Hilbert, that if two straight lines neither intersect nor are parallel, they must have a common perpendicular.

Show that this common perpendicular is the shortest distance between the two straight lines and that the distance between the two straight lines continually increases as one goes further from the common perpendicular.



3. State the correspondence between a right-angled triangle and a rectangular pentagon in Hyperbolic Geometry.

Shew that corresponding to a given right-angled triangle there are five three-right-angled quadrilaterals, and state the elements of these quadrilaterals in terms of the elements of the given right-angled triangle.

4. Shew that the perpendiculars to the sides of a hyperbolic triangle at their middle points always pass through a common point, which may be proper, improper, or ideal.

Shew that through any three non-collinear points on the hyperbolic plane there always passes a proper circle, or a horocycle, or a single branch of an equidistant curve.

5. Define a Horocycle and shew that all horocycles are congruent.

If  $AB$  and  $A'B'$  be arcs of two concentric horocycles of which  $AA'$  and  $BB'$  are axes, the arc  $AB$  being outer to the arc  $A'B'$ , shew that the ratio  $AB : A'B'$  varies in geometrical progression when the distance  $AA'$  varies in arithmetical progression.

6. Give a short account of the Cayley-Klein theory of distance, explaining what are the axioms which lead to Klein's theorem that Cayley's definition is the only definition possible.

7. Shew that the element of area on the hyperbolic plane is

$$\cosh \frac{y}{k} dx dy,$$

in Cartesian co-ordinates.

Obtain, by direct integration, the area of a right-angled triangle.

8. Establish the fundamental equation of elliptic plane trigonometry :—

$$\cos \frac{c}{k} = \cos \frac{a}{k} \cdot \cos \frac{b}{k},$$

where  $ABC$  is a right-angled triangle with  $C$  as the right angle.

9. Investigate *fully* the question whether in plane geometry Desargues' theorem may be deduced without the assistance of the axioms of congruence.

10. (a) Show how in non-Euclidean geometry conics are classified with reference to their intersections with the Absolute.

(b) Show how the equations of the Absolute and the conic can be taken in the form

$$x^2 + y^2 + z^2 = 0, ax^2 + by^2 + cz^2 = 0.$$

## (NON-EUCLIDEAN GEOMETRY—SECOND PAPER)

### EIGHTH PAPER

Examiners—{ DR. SURENDRAMOCHAN GANGULY, D.Sc.  
,, P. N. DASGUPTA, M.A., Ph.D.

*The questions are of equal value*

*ANY SIX questions carry full marks*

1. (a) In a space of four dimensions, obtain the intersection of a plane and a hyperplane when they have a point in common and also the intersection of two hyperplanes when likewise they have a point in common.

(b) Shew that two planes which do not lie in one hyperplane contain a set of lines, one and only one through each point of either plane, which is not a point of the other plane, and any two of these lines are coplanar.

2. Distinguish between *absolutely* and *simply* perpendicular planes in a space of four dimensions.

Shew that—

- (i) if a plane is perpendicular to a hyperplane, any line in the plane perpendicular to their intersection is perpendicular to the hyperplane ;
  - (ii) through a line not perpendicular to a hyperplane passes one and only one plane perpendicular to the hyperplane.
3. When are two planes said to be *isocline* to each other ?

Shew that—

- (i) if more than two pairs of opposite half-lines in one of two planes make any given angle with the other plane, the two planes are isocline ;
- (ii) if two planes are isocline in the same sense to a plane  $\alpha$ , the common perpendicular planes which they have with  $\alpha$  through any half-line of  $\alpha$  form a constant dihedral angle for all positions of the line in  $\alpha$ .

4. When are two figures said to be *symmetrically* situated with reference to a hyperplane ?

Shew that two figures symmetrically situated with respect to a hyperplane will not lose their relation of symmetry, if they are rotated round any plane of the hyperplane through the same angle in opposite directions.

5. Define a Hypersphere. Shew how a *principle of a duality* can be established on it. Also shew how the Geometry of the hypersphere can be viewed as the Point Geometry at its centre.

6. Give a brief history of the development of hyper-geometry from 1870 up to the present time, mentioning the important contributions, both analytic and synthetic, made by the German, French, Italian and American schools.

7. Define the *plane angle* and the *cells* of a hyperplane angle.

Establish the following :—

- (1) Two hyperplane angles are congruent if a plane angle of one is equal to a plane angle of the other.
- (2) Two hyperplane angles are in the same ratio as their plane angles, and the hyperplane angle may be measured by its plane angle.

8. Obtain the *identical* relation satisfied by the mutual distances of six arbitrary points in a space of four dimensions.

Use this relation to calculate the radius of a hypersphere passing through any five points in a space of four dimensions.

9. Define two *half-parallel* and *half-orthogonal* planes and deduce the analytical condition or conditions for each case in terms of the direction-cosines of the planes.

Show that the two planes,

$$\left. \begin{array}{l} x_3 = 0 \\ x_4 = 0 \end{array} \right\} \text{ and } \left. \begin{array}{l} x_0 + m_1 x_1 + m_2 x_2 = 0 \\ x_0 + m_3 x_3 + m_4 x_4 = 0 \end{array} \right\}$$

are both half-parallel and half-orthogonal.

10. Exhibit a method by which the *boundary-content* of a hypersphere can be calculated.

Apply the method to find the boundary-content of the hypersphere

$$(x-\alpha)^2 + (y-\beta)^2 + (z-\gamma)^2 + (w-\delta)^2 = R^2.$$

## GROUP C

## (THEORY OF NUMBERS—FIRST PAPER)

## SEVENTH PAPER

Examiners—{DR. ABANIBHUSHAN DATTA, M.A., PH.D.  
PROF. J. A. STRANG, M.A., B.Sc.

The questions are of equal value

Answer ANY SIX questions

1. Find the number of integers less than any given integer  $N$  and prime to it.

Find the sum of integers less than  $N$  and prime to it.

$P, Q, R, p, q, r$ , are integers and  $p, q, r$  are prime to one another. Prove that if

$$\frac{P}{p} + \frac{Q}{q} + \frac{R}{r}$$

be an integer, then

$$\frac{P}{p}, \frac{Q}{q}, \frac{R}{r}$$

will be all integers.

2. Find all the roots of  $x^{p-1} - 1 \equiv 0 \pmod{p}$ ,  $p$  being a prime.

If  $a^x - 1$  is divisible by  $n$  when  $x = n - 1$  but not when  $x$  is a factor  $< n - 1$  of  $(n - 1)$ , then  $n$  is a prime. Prove this.

If  $\delta$  be the greatest common divisor of  $n$  and  $p - 1$ , then the congruence

$$x^n \equiv b \pmod{p}$$

gives  $\delta$  incongruent roots or not according as

$$b^{\frac{p-1}{\delta}} \equiv 1 \pmod{p}$$

or not.

3. If  $S$  denotes the sum of the primitive roots of  $p$  where  $p - 1 = a^\alpha b^\beta c^\gamma \dots l^\lambda$ , ( $a, b, \dots, l, p$  being primes), prove that

(1)  $S \equiv 0 \pmod{p}$  when at least one of the exponents  $\alpha, \beta, \dots, \lambda$  is greater than 1 ;

(2)  $S \equiv (-1)^n \pmod{p}$  when none of the exponents is greater than 1 and  $n$  denotes the number of the primes  $a, b, c \dots l$ .

Prove that every prime of the form  $2^{2^n} + 1$  has a primitive root 3.

4. Define Jacobi's symbol  $\left(\frac{a}{P}\right)$  and prove that

$$(i) \left(\frac{m}{P}\right) = \left(\frac{n}{P}\right) \text{ if } m \equiv n \pmod{P};$$

$$(ii) \left(\frac{2}{P}\right) = (-1)^{\frac{P^2-1}{8}}$$

5. Write a short essay on the geometrical theory of nets as applied to quadratic forms.

6. If  $[x]$  denotes the greatest integer in  $x$ , and  $a, b$  are positive, relatively prime integers greater than unity, prove that

$$(i) \sum_{n=1}^{b-1} \left[ \frac{na}{b} \right] = \frac{1}{2}(a-1)(b-1);$$

$$(ii) \sum_{n=1}^{b-1} \left\{ \frac{na}{b} - \left[ \frac{na}{b} \right] \right\} = \frac{1}{2}(b-1);$$

$$(iii) \lim_{n \rightarrow \infty} \frac{1}{n} \sum_{n=0}^{b-1} \left\{ \frac{na}{b} - \left[ \frac{na}{b} \right] \right\} = \frac{b-1}{2b}.$$

What will be the value of the limit when the number  $\frac{a}{b}$  is not rational.

7. If  $f(s)$  and  $F(s)$  are two functions so related that

$$f(s) = a_1 F(s) + a_2 F(2s) + \dots + a_r F(rs) + \dots$$

and

$$F(s) = b_1 f(s) + b_2 f(2s) + \dots + b_r f(rs) + \dots,$$

where the  $a_r, b_r$  depend only on  $r$ , determine the general relations which must be satisfied by the coefficients.

Show in particular that if  $a_r = r^k$ , then  $b_r = r^k \mu(r)$ , where  $\mu(r)$  is Möbius's function; and hence by taking

$$f(s) = \frac{x^s}{s}, \quad |x| < 1,$$

that

$$-x' = \sum_{r=1}^{\infty} \frac{\mu(r)}{r} \log(1-x^r).$$

8. Prove that if  $n$  is a prime it is a divisor of  $1 + (n-1)!$ .

Prove that 437 is a divisor both of  $1 + (18)!$  and of  $16^{99} - 1$ .

9. Discuss the cases that arise in the solution of the congruence

$$x^2 y \equiv y - 1 \pmod{p}$$

where  $p$  is a given integer, and the integers  $x$  and  $y$  are at our disposal, except that  $|y| < p$ . In particular determine  $y$  (if possible) and solve when  $p=19$  and 22 respectively.

10. Define (i) a 'reduced form', (ii) an 'adjacent reduced form', and (iii) an 'ambiguous form'.

Prove that there exists only one adjacent reduced form which is equivalent to a given reduced form having a positive determinant.

11. Obtain the primitive representations of 227 in the form  $(3, -3, 17)$ .

## (THEORY OF NUMBERS—SECOND PAPER)

## EIGHTH PAPER

Examiners—{MR. M. GUPTA, M.Sc.  
DR. S. D. CHAWLA, M.A., PH.D.

*The questions are of equal value*

*Full marks for ANY SIX questions*

1. If a binary quadratic form  $(a, b, c)$  is converted into itself by the *unimproper* substitution  $\begin{pmatrix} \alpha & \beta \\ \gamma & \delta \end{pmatrix}$ , shew that  $\alpha + \delta = 0$ . If, moreover,  $\gamma = 0$ , prove that  $2b \equiv 0 \pmod{a}$ .

If two forms are both properly and improperly equivalent to each other, prove that each of them is improperly equivalent to itself.

2. The two properly equivalent definite forms  $(a, b, c)$  and  $(a', b', c')$  are both reduced. Shew that they may be reduced to the pair  $(a, \frac{1}{2}a, c)$ ,  $(a, -\frac{1}{2}a, c)$ .

Obtain the non-equivalent reduced forms for the determinant  $-65$  and thence determine the number of its primitive classes.

3. Obtain the conditions of *reduction* of the indefinite form  $(a, b, c)$  in terms of its roots. Determine the relations which subsist between the roots of two binary quadratic forms when they are (i) properly equivalent, (ii) improperly equivalent.

Obtain the period of the form  $(8, 3, -7)$ .

4. Indicate in general terms the successive steps which enable you to ascertain whether or not a binary quadratic form can primitively represent a given integer.

Obtain all the representations of 35 through the form  $(2, 4, -7)$ .

5. Determine the total number of genera for a given determinant  $D$ . Prove that, when  $D \equiv 6 \pmod{8}$ , half the total number of genera is impossible. How do you ascertain, *a priori*, which of the genera for a given determinant  $D$  are impossible? Illustrate your answer in the case of  $D = -126$ .

6. If a group  $A$  is contained in another group  $M$ , prove that the grade of  $A$  is a divisor of that of  $M$ .

Employ the above proposition to prove that the number of actually existing genera is almost half the number of ambiguous classes.

7. State the conditions under which you can compound two binary quadratic forms.

Prove the following :—

- (i) Two pro-primitive opposite classes compound into the principal form.
- (ii) A pro-primitive ambiguous form duplicates into the principal form.
- (iii) If  $S$  denotes the simplest class of divisor  $\sigma$  and  $K$  any other class of the same divisor, there exists a pro-primitive class  $H$  such that  $SH = K$ .

8. If  $S$  denotes a symmetrical polynomial of Gauss's periods of the roots of the cyclotomic equation

$$\frac{x^p - 1}{x - 1} = 0,$$

shew that  $S$  is a rational number,  $p$  being an odd prime.

If  $A$  and  $B$  denote the two  $\frac{1}{2}(p-1)$ -nomial periods, find the value of  $AB$ .

9. Show how to express the class number for a negative determinant as an infinite series.

Deduce that  $h(-343) = h(-7)$ .

10. Show that the solutions of the equation  $x^p - 1 = 0$  can be expressed in the form  $a + bi$  where  $a$  and  $b$  are real numbers involving only square roots of rational numbers, provided only that  $p$  is a prime of the form  $2^k + 1$ .

What are the known primes of this form ?

11. Show that the series

$$\sum \frac{1}{p},$$

where  $p$  runs through all primes, is divergent.

Deduce that

$$\lim_{x \rightarrow \infty} \frac{\pi(x)}{x} = 0,$$

where  $\pi(x)$  denotes the number of primes not exceeding  $x$ .

## MIXED MATHEMATICS

### FIRST PAPER

*The questions are of equal value*

### FIRST HALF

*Examiner—MR. N. C. GHOSH, M.A.*

*To attempt THREE questions only*

1. Find the position of the central axis and the pitch of the equivalent wrench for a given system of forces acting on a rigid body.

The equivalent wrench being given, show that the base on a given straight line at which the resultant couple is least is the point at which the straight line is intersected by the shortest distance between itself and the central axis. Find also the base at which the axis of the resultant couple makes the least angle with the given straight line.

2. Find the positions and pitches of the principal screws of the cylindroid determined by two given screws.

A rigid body is acted on by three wrenches; find the conditions of equilibrium.

*Or,*

Find the conditions of equilibrium of five forces acting along lines no two of which are coplanar, and no four of which are generators of the same hyperboloid.

If the algebraic sum of the moments of a system of forces vanishes about each of four given non-intersecting straight lines which are not all generators of the same hyperboloid, show that the central axis of the system always intersects a fixed straight line at right angles.

3. Find in the simplest form an expression for the sum of the virtual works of a given system of forces acting on a rigid body for the displacement of the body due to a small rotation  $\omega$  about an axis whose co-ordinates are  $l, m, n, \lambda, \mu, \nu$ , followed by a small translation  $d$ .

A system of material points is subjected to frictionless constraints, and has  $k$  degrees of freedom; obtain by the Principle of Virtual work a complete set of equations of equilibrium in which the forces of constraint do not appear, and interpret the results when the field of force in which the system is placed is conservative.

4. An inextensible string rests on a smooth surface under the action of a given system of external forces. Find the equations of equilibrium.

What inferences can you draw from these equations, regarding the tension and the form of the string, if the string is not acted on by any external force?

A heavy uniform inextensible string is stretched on the surface of a right circular cone (axis vertical and vertex upwards) with its ends fastened to two points on the cone. Prove that if the cone be developed into a plane the curve on which the string lay is given by the equation  $p(a+br)=1$ , the vertex of the cone being the origin,  $p$  the perpendicular on the tangent, and  $a, b$  constants.

5. Write a short note on the general stress-strain relations in an isotropic substance.

A just rigid frame is composed of five equal and weightless bars, which form the sides  $AB, BC, CD, DA$ , and the diagonal  $BD$  of a rhombus. If the frame is subject to two equal and opposite forces  $P$  acting outwards at  $A$  and  $C$ , find the increase in the distance  $AC$ , and the contraction in the diagonal bar  $BD$ . [Assume the extensibility to be the same for all the bars.]

## SECOND HALF

Examiner—MR. B. B. SEN, M.Sc.

Attempt THREE questions only

1. Show that the work done in collecting the particles of a body from infinity is the integral  $\frac{1}{2} \int V dm$  taken throughout the body,  $V$  being the potential at the position occupied by the element of mass  $dm$ .

If  $M$  denotes the mass and  $a$  the radius of a solid homogeneous sphere, prove that the attraction between two portions of it divided by a plane section of radius  $y$  is

$$\frac{3}{16} \frac{kM^2 y^4}{a^6},$$

where  $k$  is the constant of gravitation.

2. Prove the theorem of Gauss on the normal flux of force through a closed surface, and deduce Laplace's equation in polar co-ordinates.

Show that if two finite bodies have the same external level surfaces and have equal masses, their attractions at all external points are the same in magnitude and direction.

3. Find the attraction components of a solid homogeneous ellipsoid at an internal point  $(\xi, \eta, \zeta)$ .

If a concentric ellipsoidal cavity be cut out of a solid homogeneous sphere, show that within the cavity the equipotential surfaces are given by

$$(2A - B - C)x^2 + (2B - C - A)y^2 + (2C - A - B)z^2 = \text{constant},$$

where  $A, B, C$  are constants depending on the shape of the cavity.

4. If a mass of attracting matter be enclosed by an equipotential surface of potential  $V$ , show that at every point outside this surface, the potential of the mass is equal to that of a thin layer of matter placed on the surface having the density

$$\sigma = -\frac{1}{4\pi} \frac{dV}{dn},$$

where  $\frac{dV}{dn}$  is the outward normal flux of force through the surface at the point where the density is considered.

Hence show that if a certain mass of matter be uniformly distributed on a spherical surface, its potential at an external point is the same as that of a particle of equal mass placed at the centre of the sphere.

5. Show that the potential of a solid of revolution at any point not occupied by matter can be obtained in series of Legendre's functions when it is known for every point on its axis.

Find the potential of a circular disc of mass  $M$  and radius  $a$  at an external point not on the axis.

## SECOND PAPER

### FIRST HALF

Examiner—MR. H. C. SENGUPTA, M.A.

*All the questions are of equal value, and THREE out of the five questions are to be attempted*

1. Two heavy particles are attached to two points  $B, C$  of a weightless inextensible string, the end  $A$  being fixed. If the string  $ABC$  is initially horizontal, find the equation to the initial path of  $C$  and the magnitude of the initial radius of curvature at  $C$ .

2. Write down (without proof) the equations of motion of a particle moving on a smooth surface of revolution.

A particle of mass  $m$  moves on the inner surface of a cone of revolution, whose semi-vertical angle is  $\alpha$ , under the action of a repulsive force  $\frac{m\mu}{r^3}$  from the axis; the angular momentum of the particle about the axis being  $m\sqrt{\mu} \tan \alpha$ ; prove that its path is an arc of a hyperbola whose eccentricity is  $\sec \alpha$ . (The surface is smooth.)

3. Write a short note on the elliptic co-ordinates of a moving particle.

4. Apply the Lagrangian equations to determine the small oscillations of a system of particles about a position of equilibrium, when the geometrical equations do not contain the time explicitly. Deduce Lagrange's Determinantal Equation.



5. Two particles of masses  $M, m$  are connected by a light rod of length  $l$ . The first  $A$  is constrained to move along a smooth fixed horizontal wire, while the other  $B$  is free to oscillate in the vertical plane passing through the wire under the action of gravity. Deduce the equations of motion, free from the tensions and reactions, if any, according to the method of Lagrange or in any other way.

## SECOND HALF

*Examiner*—MR. J. M. BOSE, M.A., B.Sc., BARRISTER-AT-LAW

*Not more than FOUR questions to be attempted*

*The questions are of equal value*

1. Establish the equations of equilibrium of a perfect fluid under a system of external forces.

Find the surfaces of equal pressure if the components of forces be

$$y(a-z), x(a-z), xy.$$

2. A circular cylinder floats in a rotating liquid. Find the depth to which it is immersed, the axis of the cylinder being vertical.

Calculate also the work done in completely immersing the cylinder in the above case, the containing vessel being cylindrical and of given radius.

3. A square slab of uniform density of side  $a$ , and thickness  $h$ , floats with its square faces horizontal. Prove that for stability its specific gravity must not lie between .211 and .789.

4. A liquid is rotating about a vertical axis with an angular velocity  $\omega$  which is a function of the distance ( $r$ ) from the axis; prove that the form of the free surface is given by

$$gz = \int \omega^2 r dr + \text{const.}$$

If the angular velocity be equal to  $\omega_0$  for  $r < a$  and equal to  $\omega_0 \frac{a^2}{r^2}$  for  $r > a$ , find the form of the free surface.

5. Find the work done in turning a floating body through a small angle  $\theta$  about an axis in the plane of flotation.

A thin cylindrical vessel of sectional area  $A$  floats upright being immersed to a depth  $h$ , and contains water to a depth  $k$ . Find the work required to pump out the water.

6. A drop of liquid is placed on a horizontal plane. If  $\rho$  and  $\rho'$  be the principal radii of curvature,  $\omega$  the difference of internal and external pressures, and  $t$  the surface tension, prove that the equation of equilibrium is

$$\frac{1}{\rho} + \frac{1}{\rho'} = \frac{\omega}{t}.$$

If it assumes the form of a surface of revolution, find the equation of its meridian curve.

7. A mass of homogeneous liquid, the particles of which attract each other according to the Newtonian law, rotates uniformly in a state of relative equilibrium about its axis through its centre of mass. Find the possible forms of its free surface.

## THIRD PAPER

*The questions are of equal value**Answer six questions, THREE from EACH half*

## FIRST HALF

*Examiner—DR. N. N. SEN, D.Sc.*

1. Find the envelope of planes with reference to which the moment of inertia of a body is constant.

$OA$  is any straight line passing through a fixed point  $O$  of a body. A plane  $P$  is drawn perpendicular to it and at a distance from  $O$  equal to five times the radius of gyration of the body about  $OA$ . Shew that the envelope of  $P$  is an ellipsoid.

2. Prove that the rotational motion of a rigid body is independent of its translational motion with reference to the C.G. of the body.

A rod of length  $2a$  is suspended by a string of length  $l$  attached to one end; if the string and rod revolve about the vertical with uniform angular velocity and their inclinations to the vertical are  $\theta$  and  $\phi$  respectively, shew that

$$\frac{3l}{a} = \frac{(4 \tan \theta - 3 \tan \phi) \sin \phi}{(\tan \phi - \tan \theta) \sin \theta}.$$

3. A regular tetrahedron of mass  $M$  swings about one edge which is horizontal. In the initial position the perpendicular from the centre of mass upon this edge is horizontal. Shew that when this line makes an angle  $\theta$  with the vertical, the vertical component of thrust on the axis of rotation is

$$\frac{Mg}{7} (2 \sin^2 \theta + 17 \cos^2 \theta).$$

4. A garden roller is at rest on a horizontal plane, rough enough to prevent sliding, the handle being so held that the plane through the axis of the cylinder and the C.G. of the handle makes an angle  $\alpha$  with the horizon. Shew that when the handle is let go its C.G. describes an ellipse. Hence or otherwise prove that the initial radius of curvature of the path of the C.G. is

$$\frac{c (\sin^2 \alpha + n^2 \cos^2 \alpha)^{\frac{3}{2}}}{n^3},$$

where  $(n-1)M(k^2 + a^2) = ma^2$ ,  $c$  is the distance of the C.G. of the handle from the axis of the cylinder,  $m$  the mass of the handle,  $Mk^2$  the moment of inertia of the cylinder about its axis, and  $a$  its radius.

5. Four equal rods, each of mass  $m$  and length  $2a$ , are freely jointed at their ends so as to form a rhombus. The rhombus falls with a diagonal vertical, and is moving with velocity  $V$  when it hits a fixed horizontal inelastic plane. Find the motion of the rods immediately after the impact and shew that their angular velocities are each equal to

$$\frac{3}{2a} \frac{V \sin \alpha}{(1 + 3 \sin^2 \alpha)},$$

where  $\alpha$  is the angle each rod makes with the vertical.

Shew also that the impact destroys a fraction  $\frac{1}{1 + 3 \sin^2 \alpha}$  of the kinetic energy just before the impact.

## SECOND HALF

*Examiner*—DR. SUDDHODAN GHOSH, D.Sc.

6. Establish Euler's Equations of motion for a rigid body moving with one point fixed under any forces. Deduce from these equations that if the external force acts always in a *fixed* direction the component of the angular momentum of the body in the given direction remains constant throughout the motion.

7. What do you mean by 'Generalised Co-ordinates' and the 'degrees of freedom' of a system?

Establish Lagrange's Equations for an unconnected holonomic dynamical system.

A perfectly rough sphere lying inside a hollow cylinder, which rests on a perfectly rough plane, is slightly displaced from its position of equilibrium. Shew that the time of a small oscillation is

$$2\pi \sqrt{\frac{14M(a-b)}{(10M+7m)g}},$$

where  $a$  = radius of the cylinder,  $b$  that of the sphere, and  $M, m$  are the masses of the cylinder and sphere.

8. State and prove Kelvin's Theorem of minimum energy.

A system is moving in any manner. A blow is given at any point perpendicular to the direction of motion of that point. Prove that the vis viva is increased.

9. A heterogeneous rod  $OA$  is swung as a pendulum about a horizontal axis through  $O$ . Prove that if the rod break it will be at a point  $P$  determined by the condition that the C.G. of  $PA$  is the centre of oscillation of the pendulum.

10. A homogeneous billiard ball, spinning about any axis, moves on a billiard table which is not rough enough to always prevent sliding. Prove that the path of the centre is at first an arc of a parabola and then a straight line.

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. B. M. SEN, M.A., M.Sc.*Attempt THREE questions only*

1. Define rigorously the terms limit-point, upper and lower limits.

Prove the Bolzano-Weirstrass theorem that any bounded sequence must have at least one limit-point.

Find the limit of the following sequences when  $n \rightarrow \infty$  :—

$$(a) \frac{1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{2n}}{n};$$

$$(b) \frac{1}{n} (n!)^{\frac{1}{n}};$$

and the limit-point for the sequence

$$(c) z = \frac{1}{a+n} \text{ when } n \text{ is even,}$$

$$\frac{1}{a-n} \text{ when } n \text{ is odd.}$$

2. When is an infinite product said to converge? Prove that the infinite product

$$\prod (1 + a_n)$$

is convergent if  $\sum a_n$  converges and if  $\sum a_n^2$  is absolutely convergent.

Prove that

$\prod \cos x_n$  converges if  $\sum |x_n|^2$  converges. Hence deduce that

$$\cos \frac{x}{2} \cos \frac{x}{4} \cos \frac{x}{8} \dots = \frac{\sin x}{x}.$$

3. Define the uniform convergence of a series of functions of a parameter.

What are the least restrictions that would have to be imposed on two sequences  $A_n(x)$ ,  $b_n(x)$  in order to infer the uniform convergence of  $\sum a_n(x)b_n(x)$  within a given interval  $J$ .

Prove your statement.

Test the following series for uniform convergence

$$\sum \frac{\cos nx}{n}, \sum \frac{\cos nx}{\sqrt{n}}.$$

4. Define the integral of a function of a complex variable along a path and state the conditions under which the integral between two points is independent of the path.

Show by contour integration

$$(a) \int_0^\infty \frac{t^z - 1}{t + e^{i\alpha}} dt = \frac{\pi e^{i(z-1)\alpha}}{\sin \pi z} \quad 0 < z < 1,$$

$$-\pi < \alpha < \pi$$

$$(b) \int_{-\infty}^\infty \frac{e^{ax} dx}{1 + e^x} = \pi \operatorname{cosec} a\pi \quad 0 < a < 1.$$

5. Explain the process of analytic prolongation and illustrate with an example, the case of a line of singularities.

Show that if  $|x| < 1$

$$x = \frac{1}{2} \left( \frac{2x}{1+x^2} \right) - \frac{1}{2^4} \left( \frac{2x}{1+x^2} \right)^3 + \frac{1 \cdot 3}{2^4 \cdot 6} \left( \frac{2x}{1+x^2} \right)^5 + \dots$$

Find the value of the series when  $|x| < 1$ .

## SECOND HALF

Examiner—DR. N. N. SEN, D.Sc.

Answer THREE questions only

6. Define Fourier Series. State and prove Fourier's Theorem.

If  $a_0$ ;  $a_1, b_1$ ;  $a_2, b_2$ ; etc., be Fourier constants for the function  $f(x)$ , prove that

$$\frac{1}{\pi} \int_{-\pi}^{\pi} \{f(x)\}^2 dx = 2a_0^2 + \sum_{n=1}^{\infty} (a_n^2 + b_n^2)$$

when  $f(x)$  is bounded and integrable in  $(-\pi, \pi)$ .

7. Prove that the contour integral

$$\int \frac{(t^2-1)^n}{(t-z)^{n+1}} dt$$

is a solution of Legendre's Equation.

Prove that

$$(i) \frac{1-h^2}{(1-2zh+h^2)^{\frac{3}{2}}} = \sum_{n=0}^{\infty} (2n+1) P_n(z) h^n;$$

$$(ii) 1 + \frac{P_1(\cos \theta)}{2} + \frac{P_2(\cos \theta)}{3} + \dots \text{to } \infty = \log \frac{1 + \sin \frac{\theta}{2}}{\sin \frac{\theta}{2}}.$$

8. Find solutions of the Hypergeometric Equation in the form

$$\int t^{\alpha-\gamma} (t-1)^{\gamma-\beta-1} (t-z)^{-\alpha} dt$$

indicating the contours in each case.

Hence or otherwise deduce that

$$1 + \frac{\alpha \cdot \beta}{1 \cdot \gamma} z + \frac{\alpha(\alpha+1)\beta(\beta+1)}{1 \cdot 2 \cdot \gamma(\gamma+1)} z^2 + \dots$$

is a solution of the hypergeometric equation.

9. Prove that

$$(i) J_n'(z) = \frac{1}{2} [J_{n-1}(z) - J_{n+1}(z)];$$

$$(ii) J_{n-1}(z) + J_{n+1}(z) = \frac{2n}{z} J_n(z).$$

Obtain a solution of the equation

$$\frac{\partial u}{\partial t} = c^2 \left( \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} + \frac{\partial^2 u}{\partial z^2} \right)$$

in the form

$$u = \sum_{\lambda, n} e^{-\lambda^2 t} \lambda^{-\frac{3}{2}} r^{-\frac{1}{2}} J_{n+\frac{1}{2}}(k_\lambda r) S_n(\theta, \phi).$$

10. Prove that the solution at the point  $(r, \theta, \phi)$  of Laplace's equation

$$\Delta^2 V = 0$$

is given by

$$V = \frac{a(a^2 - r^2)}{4\pi}$$

$$\int_{-\pi}^{\pi} \int_0^{\pi} \frac{f(\theta', \phi') \sin \theta' d\theta' d\phi'}{[r^2 - 2ar\{\cos \theta \cos \theta' + \sin \theta \sin \theta' \cos(\phi - \phi')\} + a^2]^{\frac{3}{2}}}$$

when  $V$  satisfies the boundary condition  $V = f(\theta, \phi)$  on  $r = a$ .

### FIFTH PAPER

Examiners—{ DR. S. GHOSH, D.Sc.  
,, S. C. KAR, M.A., PH.D.

*Not more than six questions are to be answered, of which two at least should be from Questions 8, 9, and 10*

1. Distinguish clearly between stream lines and paths of particles and write down their differential equations. When are they identical?

$$\text{If } u = e^{my} \cos mx \sin nt,$$

$$v = e^{my} \sin mx \sin nt,$$

$$w = 0,$$

obtain the equations of the stream lines and paths of particles.

2. An elliptic cylinder is moving in an infinite liquid with velocity  $U$  parallel to the axial plane through the major axis of a cross section. Calculate the kinetic energy of the liquid.

Shew that the motion of a liquid stream past the elliptic disc

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1,$$

the velocity at infinity being parallel to the axis of  $x$  and equal to  $V$ , can be represented by the relation

$$\phi + i\psi = V\{az - b\sqrt{z^2 - c^2}\}/(a - b),$$

where  $c = \sqrt{a^2 - b^2}$  and  $z = x + iy$ .

3. Liquid fills the space between a solid sphere and a fixed concentric spherical shell. Find the velocity potential of the initial motion when the solid sphere is moved with a given velocity in any direction. Hence deduce the velocity potential of the motion of an infinite mass of liquid due to the motion of a sphere in it.

Shew further that in the case of a sphere moving in a liquid with a given velocity, the introduction of a rigid spherical boundary acts as a constraint in creasing the kinetic energy.

4. Obtain Kirchhoff's equations of motion of a solid in a liquid.

Shew that when a solid moves in an infinite mass of liquid under no external forces, there are three directions of permanent translation. If

$$2T = A(u^2 + v^2 + w^2) + P(p^2 + q^2 + r^2) + 2b(up + vq + wr),$$

find the directions of permanent translation.

5. Shew that a rectilinear vortex whose cross section is an ellipse and whose spin is constant, can maintain its form rotating as if it were solid, in an infinite liquid.

Find also the paths of the particles.

6. Simple harmonic waves are propagated along a straight canal of finite depth. Find the velocity potential  $\phi$  and the velocity of waves of length  $\lambda$ .

Prove that in a uniform heavy liquid of the depth  $h$ , there is not more than one wavelength corresponding to any given velocity, and that any velocity less than  $\sqrt{gh}$  is the velocity of some wave.

7. The space between the two co-axial cylinders is filled with liquid, and the outer is surrounded by liquid, extending to infinity, the whole being bounded by planes perpendicular to the axis. If the inner cylinder be suddenly moved with given velocity, prove that the velocity of the outer cylinder to that of the inner will be in the ratio

$$2b^2c^2\rho : \rho(a^2b^2 - a^2c^2 + b^4 + b^2c^2) + \sigma(a^2 - b^2)(b^2 - c^2),$$

where  $a$  and  $b$  are the external and the internal radii of the outer cylinder,  $\sigma$  its density,  $c$  the radius of the inner cylinder, and  $\rho$  the density of the liquid.

8. Obtain the equations of impulsive motion of the liquid.

Prove that if liquid be contained in a closed surface, the circulation and the molecular rotation cannot be altered by any impulse applied to the boundary.

9. Shew that in the case of two-dimensional irrotational motion of a liquid

$$\phi + i\psi = f(x + iy).$$

If  $\phi = f(x, y)$ ,  $\psi = F(x, y)$  are the velocity potential and the current function of a liquid and if we write

$$x = f(\phi, \psi), y = F(\phi, \psi),$$

and from these expressions find  $\phi$  and  $\psi$ , prove that the new values of  $\phi$  and  $\psi$  will be the velocity potential and current function of some other liquid motion.

Shew further that the above transformation when applied to the motion of a liquid between a rectangular hyperbola and its asymptotes, gives the motion of liquid between two confocal parabolas.

10. State and prove Green's theorem. Deduce an expression for the kinetic energy of the irrotational motion of a liquid.

An ellipsoidal shell containing liquid is projected into air and then it falls to the ground and comes to rest. Describe the liquid motion within the ellipsoid (1) when the ellipsoid has a motion of translation only, and (2) when it has both translation and rotation.

## SIXTH PAPER

*The questions are of equal value**Answer THREE questions from EACH half*

## FIRST HALF

*Examiner—MR. B. C. DAS, M.Sc.*

1. (a) The length of the longest day at a given place is  $14\frac{1}{2}$  hours. Find the latitude, supposing the obliquity of the ecliptic to be  $23^{\circ} 28'$ ;

given  $L \tan 23^{\circ} 28' = 9.68761,$

$L \cos 71^{\circ} 15' = 9.50710,$

$L \cot 53^{\circ} 29' = 9.86949.$

(b) A railway train is moving N.E. at 40 miles an hour in lat.  $60^{\circ}$ . Prove that the culmination of a star of decl.  $30^{\circ}$  is seen by an observer on the train when it is approximately  $\frac{108}{5\pi}$  degrees from the instantaneous meridian.

[Assume the radius of the earth to be 4,000 miles.]

2. (a) Define 'equation of time' and show that it is approximately given by

$$E = 2e \sin(L - \omega) - \tan^2 \frac{1}{2} \omega \sin 2L,$$

where  $e$  is the eccentricity of the earth's orbit  $\omega$  the obliquity,  $\tilde{\omega}$  the longitude of the perigee, and  $L$  the mean longitude of the sun.

(b) If expressed in time,  $2e$  be nearly 7 minutes and  $\tan^2 \frac{1}{2} \omega$  nearly 10 minutes, show that the equation of time vanishes four times a year.

3. Calculate the effect of refraction on the apparent distance between two neighbouring stars and on the angle which the line joining the stars makes with the vertical.

4. (a) Show that the effect of aberration is to make the stars, when referred to the celestial sphere, describe small ellipses about their true places.

(b) If  $\lambda$  is the longitude of a star and  $\beta$  its latitude, prove that on account of aberration the star will be displaced by a distance which is equal to

$$\sqrt{\frac{1}{2} k^2} \{ 1 + \sin^2 \beta + \cos^2 \beta \cos 2(\odot - \lambda) \}.$$

5. (a) Prove that the declination of the moon at the time of its crossing the meridian of a given place is altered by diurnal parallax by an amount which is approximately equal to

$$\frac{\sin \pi' \sin (\delta - \phi')}{\sin 1''} + \frac{\sin^2 \pi' \sin 2(\delta - \phi')}{\sin 2''} + \frac{\sin^3 \pi' \sin 3(\delta - \phi')}{\sin 3''}$$

$\phi'$  being the geocentric latitude of the place,  $\pi\phi'$  the horizontal parallax of the moon, and  $\delta$  its declination.

(b) Explain how from the above formula you may derive the distance of the moon.



## SECOND HALF

*Examiner*—MR. P. L. GANGULY, M.A.

6. (a) Show how to find the local time at a place, whose latitude is known by means of an observation of the zenith distance of a known star.

(b) If there be a small error in the latitude, prove that the best result will be obtained by observing the star when it crosses the prime vertical; but if the declination of the star be greater than the latitude of the place then the great circles joining the star with the zenith and the pole should cut at right angles.

7. (a) The style of a horizontal sundial, which is accurately graduated for a given place, is bent through a small angle  $\delta$ . If  $a$  be the hour angle at which there is no error in the time given by the dial, find the error in the time at any hour angle  $h$  on a given day.

(b) Show that at 6 o'clock the error is independent of the latitude of the place, and at sunset it vanishes.

8. (a) Prove the formula for the correction in the time of transit of a given star, viz.,

$$t = b \cos(\phi - \delta) \sec \delta + k \sin(\phi - \delta) \sec \delta + c \sec \delta$$

where  $b$ ,  $k$ , and  $c$ , are the errors of level, azimuth, and collimation respectively; and reduce it to Bessel's form,

$$t = m + n \tan \delta + c \sec \delta.$$

(b) Show that the error in the time of a transit of a star due to the three errors in the instrument is a minimum for a star whose declination is,

$$\sin^{-1} \{ (k \cos \phi - b \sin \phi) / c \},$$

if it be a real angle; where  $\phi$  is the latitude of the observatory.

9. (a) Discuss mathematically the condition of occurrence of a lunar eclipse at a particular full moon; explain the terms 'ecliptic limit', 'major and minor limits.'

(b) Show that the maximum duration of a lunar eclipse is

$$\frac{51 (\pi_0 + \pi_0' - \odot) + 50 \epsilon}{25m \sec i} \left( 1 + \frac{s}{m} \cos i \right)$$

hours approximately, where  $\pi_0$ ,  $\pi_0'$ ,  $\odot$ ,  $\epsilon$ ,  $s$ ,  $m$  are respectively the horizontal parallaxes, semi-diameters, and hourly motions in longitude of the sun and moon and  $i$  is the inclination of the moon's orbit to the ecliptic.

10 What are 'binary stars' and 'spectroscopic binaries'? The parallax of  $\alpha$  Centauri is  $0''.75$ , the semi-major axis of the apparent ellipse is  $17''.70$  and the period is  $81.1$  years; calculate the semi-major axis of the real ellipse and the mass of the system.

## (ELASTICITY—FIRST PAPER)

## SEVENTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—DR. J. GHOSH, D.Sc.**Attempt THREE questions only*

1. Show that the displacement at any point of an elastic solid is composed of a pure strain, derivable from a potential and a rotation.

Show also that when the strain-components vanish, the corresponding solution gives a rigid body displacement.

2. Work out the problem of the equilibrium of a uniform rectangular plate bent by couples.

Find the potential energy of the bent plate per unit area and shew that it varies as the square of the curvature if the plate is bent into a cylindrical form.

3. Establish the existence of a strain energy function in an elastic body.

Calculate the value of Young's Modulus in any direction in a non-isotropic body in terms of elastic constants.

4. A solid sphere of radius  $r_0$  is strained by the mutual gravitation of its parts. Find the displacement at any point and show that the radial strain is contraction within the surface

$$r_0 \sqrt{\left\{ \frac{(3-\sigma)}{(3+3\sigma)} \right\}}$$

and it is extension outside this surface.

5. Show that if either the surface displacements or the surface tractions are given, the solution of the problem of equilibrium is unique, in the sense that the state of stress (and strain) is determinate without ambiguity.

Prove that the potential energy of deformation of a body which is in equilibrium under given load, is equal to half the work done by the external forces, acting through the displacements from the unstressed state to the state of equilibrium.

## SECOND HALF

*Examiner—MR. B. B. SEN, M.Sc.**Attempt THREE questions only*

1. Show that the system of values

$$u = \frac{Axx}{r^2}, v = A \frac{yz}{r^3}, w = A \left( \frac{z}{r^3} + \frac{\lambda + 3\mu}{\lambda + \mu} \frac{1}{r} \right)$$

is a solution of the equations of elastic equilibrium of an isotropic body except at the origin.

Shew also that the above displacements are produced by a single force applied at the origin in the direction of the axis of  $z$ .

2. A concentrated force  $F$  acts at a point on the boundary of a semi infinite elastic plate. Show that the stresses produced can be derived from the stress function  $-\frac{F}{\pi} r\theta \sin \theta$ .

A circular plate is acted on by two equal and opposite forces at the ends of a diameter. If the forces act along the diameter, find the stress function which will yield the stress system that gives no surface forces on the boundary of the circle.

3. Give a description of the method of singularities as applied to the solution of potential problems.

Prove the relation

$$1/\pi(\lambda+2\mu)\Delta_0 = \iint \left[ \left( X_{\nu}^{(0)} u + Y_{\nu}^{(0)} v + Z_{\nu}^{(0)} w \right) - (X_{\nu} u_0 + Y_{\nu} v_0 + Z_{\nu} w_0) \right] ds$$

$$\text{where } (u_0, v_0, w_0) = \left( \frac{\partial r^{-1}}{\partial x}, \frac{\partial r^{-1}}{\partial y}, \frac{\partial r^{-1}}{\partial z} \right),$$

$X_{\nu}^{(0)}, Y_{\nu}^{(0)}, Z_{\nu}^{(0)}$ , surface tractions calculated from them,  $(u, v, w)$ , any set of displacements satisfying the equations of equilibrium, and  $X_{\nu}, Y_{\nu}, Z_{\nu}$ , the corresponding surface tractions.

4. Show in a general manner that when two bodies impinge, the total pressure of compression at any moment during contact varies as  $\alpha^{\frac{2}{3}}$ , where  $\alpha$  is the relative displacement of the centres of mass of the two bodies resolved in the direction of their common normal.

Hence find the value of  $\alpha$  at the instant of greatest compression and the direction of impact, the velocity of approach of the bodies before impact being given.

5. Prove that if the tractions on the surface of a spherical body are given in series of surface harmonics as

$$X_r = \sum X_n, \quad Y_r = \sum Y_n, \quad Z_r = \sum Z_n,$$

the tractions at any point within the surface are

$$rX_r = \frac{(a^2 - r^2)}{2(1 + \sigma)} \sum \frac{n-1}{2n+1} \frac{\partial \theta_n}{\partial x} + a \sum X_n, \text{ etc.},$$

where

$$a = \frac{a(2n+1)(1+\sigma)}{(1+\sigma)(2n+1)+n(n-1)} \left[ \frac{\partial X_{n+1}}{\partial x} + \frac{\partial Y_{n+1}}{\partial y} + \frac{\partial Z_{n+1}}{\partial z} \right].$$

## (ELASTICITY—SECOND PAPER)

## EIGHTH PAPER

*Only THREE questions to be attempted from EACH half**The questions are of equal value*

## FIRST HALF

*Examiner—MR. B. B. SEN, M.Sc.*

1. Explain the method of solving the torsion problem for an elastic prism of isotropic material having any form of section.

Find the torsion function when the section is bounded by two confocal ellipses.

2. Prove Clapeyron's theorem of three moments.

Solve the linear difference equation that you obtain when the spans are equal.

3. Show that, by the application of a suitable wrench, a thin rod whose cross section is a circle can be held so that its central line forms a given helix.

Find out the components of the required wrench in terms of the constants of the helix.

What is the kinetic analogue of the problem?

4. A thin rod, of which the central line in the unstressed state is a circle is acted on by uniform normal pressure  $X$  per unit of length. Find the curvature of the central line in the bent state.

Discuss the stability of a circular ring under normal pressure.

5. Assuming that the potential energy of a bent plate per unit of area is given by the expression

$$\frac{1}{2} D \left[ \left( \frac{1}{R_1} + \frac{1}{R_2} \right)^2 - 2(1-\sigma) \frac{1}{R_1 R_2} \right],$$

deduce the differential equation for the deflection of a thin plate bent by transverse forces.

Find also the conditions which hold at the boundaries.

## SECOND HALF

*Examiner—DR. S. GHOSH, D.Sc.*

1. In the general case of wave motion in an isotropic elastic medium, show that the dilatation and the rotation components satisfy differential equations of the form

$$\frac{\partial^2 \phi}{\partial t^2} = c^2 \Delta^2 \phi$$

Interpret 'c'. Also solve the characteristic equation after Poisson.

2. Investigate the radial vibrations of a hollow sphere and hence deduce the frequency equation for a thin spherical shell.

3. A single force  $X(t)$  is acting at the origin in an infinite elastic medium in the direction of the  $x$ -axis. Find the displacement at any point in the medium at any time.

4. Neglecting rotatory inertia, find the frequency equation for flexural vibrations of a thin circular ring moving in its own plane.

5. Discuss the problem of extensional vibrations of a thin rod clamped at both ends.

Obtain the correction of the velocity of wave propagation when the rotatory inertia is not neglected.

### SEVENTH PAPER

Examiner— $\left\{ \begin{array}{l} \text{PROF. N. R. SEN, D.Sc., Ph.D.} \\ \text{DR. S. C. KAR, M.A., Ph.D.} \end{array} \right.$

*The question are of equal value*

*six questions to be attempted*

1. If on a system of conductors at rest charges  $E_1, E_2$ , etc., give rise to potentials  $V_1, V_2$ , etc., then a system of charges  $kE_1, kE_2$ , etc., would give rise to potentials  $kV_1, kV_2$ , etc,  $k$  being a constant. Establish this.

A parallel plate condenser with distance  $h$  between the plates has one of these earthed and the space between is filled with a medium whose inductive capacity increases uniformly from the value  $k_1$  at the earthed plate to  $k_2$  at the other. Find the capacity per unit area of the plate, edge effect being neglected.

2. Write down, with explanations, the equations which determine an electrostatic field in a dielectric material. Show that the energy of the field of a given system of charges at rest is diminished by bringing a dielectric material into the field.

A homogeneous electric field exists in a medium of dielectric constant  $e_1$ . A sphere of dielectric constant  $e_2$  is brought into the field. Find the resultant field.

3. The inner sphere of a spherical condenser (radii  $a, b$ ) has a constant charge  $E$ , and the outer conductor is at potential zero. Under the internal forces the outer conductor contracts from radius  $b$  to radius  $b_1$ . Prove that the work done by the electric forces is

$$\frac{1}{2} E^2 \frac{b-b_1}{bb_1}.$$

4. How would you find a vector field with rotation but with no sources? Give an illustration from electrical theories

Describe the general behaviour of a magnetic material placed in a magnetic field. Deduce the energy equation for a system of ferromagnetic bodies in a magnetic field which undergoes a cyclic variation.

A magnetic particle of moment  $m$  lies at a distance  $a$  in front of an infinite block of soft iron bounded by a plane face to which the axis of the particle is perpendicular. Find the force acting on the magnet, and show that the potential energy of the system is

$$\frac{-m^2(\mu-1)}{8a^2(\mu+1)}$$

$\mu$  being the magnetic permeability.

5. Deduce the potential of a magnetised body in the form

$$\Omega = \iiint I \left\{ I \frac{\partial}{\partial x} + m \frac{\partial}{\partial y} + n \frac{\partial}{\partial z} \right\} \left( \frac{1}{r} \right) dx dy dz.$$

A spherical shell of radius  $a$  is normally magnetised so that its strength at any point is  $S_n$  where  $S_n$  is a spherical surface harmonic of order  $n$ . Show that the potential at a distance  $r$  from the centre is

$$-4\pi \frac{n+1}{2n+1} \left( \frac{r}{a} \right)^n S_n, \text{ when } r < a.$$

$$\frac{n}{2n+1} S_n \left( \frac{a}{r} \right)^{n+1}, \text{ when } r > a.$$

6. Two circular circuits are in planes at right angles to the line joining their centres. Show that the coefficient of mutual induction is

$$2\pi(a^2 - c^2) \int_0^{\pi} \frac{\cos 2\theta d\theta}{\sqrt{a^2 \sin^2 \theta + c^2 \cos^2 \theta}}$$

where  $a, c$  are the largest and the shortest straight lines which can be drawn from one circuit to the other.

7. Prove that the law of induction in a medium moving with velocity  $v$  can be written as

$$\text{rot } E = -\frac{1}{c} \left( \frac{\partial B}{\partial t} - \text{rot } [vB] \right).$$

$E$  and  $B$  being electric vector and magnetic induction respectively.

Two electric circuits containing resistances and self-inductions are close to each other. A periodic electromotive force exists in the first circuit. Compare the currents in the two circuits.

8. Write down Maxwell's equations of the electromagnetic field and show how from them the ordinary properties of the electrostatic and quasi-stationary electromagnetic fields may be deduced. Show further how Maxwell's equations are consistent with the principle of energy.

Work out a theory of the reflecting power of metals with respect to electromagnetic vibrations.

9. An electromagnetic beam of radiation polarised perpendicularly to the plane of incidence enters a non-magnetic non-conducting medium. Deduce the law of refraction and the ratio of the intensities of the refracted and incident beams. Under what conditions would this ratio be equal to unity?

## EIGHTH PAPER

Examiners— $\left\{ \begin{array}{l} \text{PROF. N. R. SEN, D.Sc., Ph.D.} \\ \text{PROF. S. N. BOSE, M.Sc.} \end{array} \right.$

*The questions are of equal value*

*Answer ANY FIVE questions*

1. Explain what is meant by 'skin-effect' in electrical phenomena. When the skin-effect is weak, calculate the resistance and self-induction of a straight metallic wire with circular cross-section traversed by a high-frequency alternating current.

2. What is Ponderomotive force in an electromagnetic field? Show that the total force on a body in an electromagnetic field

$$F = \int T ds - \frac{dG}{dt}$$

where  $T$  is the surface-traction derivable from a symmetric tensor of the second rank and  $G$  a vector. How is this equation physically interpreted?

3. Derive expression for scalar- and vector-potentials for a moving electron, and calculate the total radiation from an accelerated electron.

4. Calculate the electromagnetic mass of a contractile electron.

5. Write a short essay on the classical theory of dispersion.

6. Define a world-point. Describe the partition of the four-dimensional space-time manifold according to Minkowski. What is proper-time? Show that the straight line joining two world-points has the longest proper-time interval.

7. Discuss from the standpoint of special relativity theory the principles of conservation of energy and momentum in an electromagnetic field. How are they applied by Einstein to discuss the analogous principles in mechanics?

8. Write down the electromagnetic equations in 4-dimensional vector-form, and establish the following relation between Force-4-vector and the World tensor—

$$F = - \triangle iv T.$$

Discuss the meaning of the different components of the World-tensor.

9. Give a short account of Minkowski's Electrodynamics of ponderable bodies.

## (ADVANCED ASTRONOMY—FIRST PAPER)

## SEVENTH PAPER

*The questions are of equal value**Answer six questions, THREE from each half*

## FIRST HALF

*Examiner—DR. N. N. SEN, D.Sc.*

1. Assuming the differential equation for refraction to be

$$dR = a\mu_0 \sin z d\mu / (\mu^2 r^2 - a^2 \mu_0^2 \sin^2 z)^{\frac{1}{2}},$$

show that, within a few degrees of the horizon, the refraction can be expressed in the form

$$R = \frac{A}{\sqrt{2}} \sin z \sum_{n=0}^{\infty} B_n \cos^{2n} z \int_0^1 u^{-(n+\frac{1}{2})} dw.$$

On a certain day, the declination of the sun is  $15^\circ \text{N}$ . Prove that, due to refraction, the point of the compass where the sun rises at Calcutta (lat.  $22\frac{1}{2}^\circ \text{N}$ ) is shifted by

$$59'' \cdot 2 \sqrt{(2 - \sqrt{2})(\sqrt{3} - \sqrt{2})}.$$

2. Explain clearly the term 'probability curve' with reference to accidental errors of observation, and proceed to determine its equation after discussing its continuity. State the fundamental hypotheses involved.

3. Describe briefly the motions of the equator and ecliptic due to lunisolar and planetary precession. Given the mean positions of the equator and the ecliptic at any instant, show how to determine their positions after a widely separated interval as altered by precession.

4. A solar eclipse occurs on earth. Show how you would proceed to determine the bounding curves of the visibility area of the eclipse on the earth's surface, at which the eclipse begins or ends at sunrise or sunset.

5. Obtain the effects of aberration on the R.A. and declination of a close circumpolar star in the form

$$\tan(\alpha' - \alpha) = \frac{h \sin(H + \alpha) \sec \delta}{1 - h \cos(H + \alpha) \sec \delta}$$

$$\tan(\delta' - \delta) = \frac{j \sin(J + \delta)}{1 - j \cos(J + \delta)}$$

explaining the notations.

Show that owing to annual aberration, the apparent places of all stars actually lying on a small circle of the celestial sphere, are on another small circle.



## SECOND HALF

Examiner—MR. B. C. DAS, M.Sc.

6.  $\phi$  being the latitude of the place of observation,  $\delta$  the declination of a star, and  $h$  its west hour angle, and the coefficient of refraction being  $58''\cdot4$ , shew that refraction diminishes the apparent rate of change of hour angle by

$$24\cdot5 \sin m \cos m (\tan \delta + \cot \phi \sec h) \times \operatorname{cosec}^2(\delta + m)$$

per day, where  $\tan m = \cot \phi \cos h$ .

Find also the rate of change of refraction in declination per hour.

7. A wall faces east of south, and on a certain day the sun is observed to leave the wall at  $\frac{12h_1}{\pi}$  hours after noon. Six months later, the sun is observed to leave the wall at  $\frac{12h_2}{\pi}$  hours after noon, and on an intermediate day, the sun leaves the wall at sunset at  $\frac{12h}{\pi}$  hours after noon. Prove that the latitude of the place is

$$\sin^{-1} \sqrt{\tan \frac{1}{2} (h_1 + h_2) \cot h}.$$

8. Two planets  $P_1$ ,  $P_2$  revolve in circular orbits at the distances  $r_1$ ,  $r_2$  from the sun, and when they appear stationary to one another,  $P_2$ 's elongation as seen from  $P_1$  is  $\cot^{-1}(\frac{1}{2} \tan \theta)$ . Shew that

$$\frac{r_1}{r_2} = \frac{1}{2} \tan \frac{\theta}{2} \tan \theta.$$

9. The R.A. and declination of two stars are  $\alpha$ ,  $\alpha'$  and  $\delta$ ,  $\delta'$ ; and  $A$  is the sun's R.A. at a time when the aberrations in declination of both stars vanish; prove that

$$\sec^2 \omega \tan A = \frac{\tan \delta \sin \alpha - \tan \delta' \sin \alpha'}{\tan \delta \cos \alpha - \tan \delta' \cos \alpha'}.$$

10. Shew that the equation of the centre expressed as a Fourier Series of the true anomaly  $v$  is

$$2 \sum_{n=1}^{\infty} \frac{1}{n} (-1)^{n+1} \tan^{\frac{\phi}{2}} (1 + n \cos \phi) \sin nv,$$

where the eccentricity  $e = \sin \phi$ .

Prove that the equation of the centre is greatest when

$$v = \frac{\pi}{2} + \frac{3e}{4} + \frac{21}{128} e^3 + \dots$$


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## (ADVANCED ASTRONOMY—SECOND PAPER)

## EIGHTH PAPER

*The questions are of equal value**Answer SIX questions, THREE from EACH half*

## FIRST HALF

*Examiner—DR. N. N. SEN, D.Sc.*

1. Assuming the earth to be a sphere, shew that the stereographic projection of a loxodrome is an equiangular spiral.

Taking the equator as  $x$ -axis, the first meridian as  $y$ -axis shew that the equation on the Mercator's map of a small circle of angular radius  $\rho$ , whose pole is at  $(x_0, y_0)$  is

$$\cos \lambda (x - x_0) + \cosh \lambda (y + y_0) = 2 \cos^{\frac{1}{2}} \rho \cosh \lambda y \cosh \lambda y_0,$$

where  $\lambda$  is a constant in terms of which you are to define the scale.

2. At a conjunction of the sun and moon, the moon just grazes the sun, but there is no sensible partial eclipse at any point of the earth's surface. Prove that

$$(\pi'_0 - \pi_0 + \gamma_\odot + \gamma_\ominus)^2 = \frac{(\delta_m - \delta_\odot)^2 (\alpha_m - \alpha_\odot)^2 \cos \delta_m \cos \delta_\odot}{(\delta_m - \delta_\odot)^2 + (\alpha_m - \alpha_\odot)^2 \cos \delta_m \cos \delta_\odot},$$

where  $\gamma_\odot$  and  $\gamma_\ominus$  are the angular radii of the sun and moon,  $\pi_0$  and  $\pi'$  their parallaxes,  $\delta_\odot$  and  $\delta_m$  their declinations at the instant of conjunction in R.A., and  $\alpha_\odot$ ,  $\alpha_m$ ,  $\delta_\odot$ ,  $\delta_m$  their hourly motion in R.A. and declination.

Find the minimum distance between the centres which at the time  $t$  is approximately the square root of

$$\{\delta_m - \delta_\odot + t(\delta_m - \delta_\odot)\}^2 + t^2 (\alpha_m - \alpha_\odot)^2 \cos \delta_m \cos \delta_\odot.$$

3. Explain clearly with full mathematical details how observations on the beginning and ending of a transit of Venus from two stations on earth can be utilized to determine the distance of the earth from the sun.

4. If the moon be treated as spheroidal, shew that the boundary of the illuminated portion as seen from the earth is composed of two semi-ellipses, neglecting the parallaxes of the earth and sun as viewed from the satellite.

5. The latitudes of two stars are  $\beta$  and  $\beta_0$  and their difference of longitudes is  $l$ ; the parallax of the second is insensible and that of the first is  $\sigma$ . Find the effect of parallax on the apparent distance and position angle of the first star relative to the second with reference to the pole of the ecliptic.

Find also the angle between the extreme positions of the arc joining them.

## SECOND HALF

*Examiner—DR. H. SARKAR, D.Sc.*

6.  $n$  quantities are being determined from  $m$  observations, the observed quantities being connected by  $p$  equations of condition. If the weights of the observations are  $w_1, w_2, \dots, w_m$  and  $m > n > p$ , explain as fully as you can how you would proceed to find the most probable values of the quantities sought.

The observed values of the angles of a triangle are found to be  $29^\circ 55' 30''$ ,  $59^\circ 59'$ , and  $89^\circ 58' 30''$  and the weights of the observations are 8, 2 and 1 respectively. Find the most probable values of the angles.

7. Prove that for a star which rises to the north of east, the rate at which the azimuth changes is the same when it rises as when it is due east.

Three stars  $A$ ,  $B$ ,  $C$  are very nearly in a great circle, the angle made by  $A$  and  $C$  at  $B$  being  $180^\circ - \beta$ , where  $\beta$  is small. Show that if  $t$  be the time which elapses between  $AB$  and  $BC$  being vertical,

$$t = \frac{B \sin z}{15 \cos a \cos l},$$

where  $z$  is the zenith distance and  $a$  the azimuth of  $B$  when  $AB$  or  $BC$  is vertical, and  $l$  the latitude of the place.

8. Explain the theory of Proper Motion of stars and the effect of proper motion on the R.A. and declination of stars.

How has the proper motion of the sun been determined?

9. What is Laplace's Nebular Hypothesis? State and explain its merits and demerits.

10. Explain the theory of Tidal Evolution of the Earth-Moon System.

What is the future of the above system on the basis of the Tidal Theory?

## (TIDES AND SURFACE WAVES—FIRST PAPER)

### SEVENTH PAPER

Examiners—{ DR. S. C. KAR, M.A., PH.D.  
MR. B. M. SEN, M.A., M.Sc.

*The questions are of equal value*

*Attempt six questions only*

1. Find the tide-producing potential and the equilibrium tidal height for a complete globe. How would you find this tidal height for a lake?

2. Derive the equation of tidal motion in a canal, clearly stating the underlying assumptions.

Solve the equation of lunar tides in a canal coincident with the equator and discuss the question of direct and inverted tides.

3. A rectangular canal communicates at one end with an open sea where a tidal oscillation  $\zeta = a \cos \sigma t$  is maintained. Find to a second approximation the expression for the tidal elevation in the canal and point out the limits of validity of the solution.

4. Find the height of free tidal oscillations in a circular sea of radius  $a$  whose depth varies according to the law

$$h = h_0 \left( 1 - \frac{r^2}{a^2} \right).$$

Shew that the frequency  $\sigma$  of the gravest symmetrical mode is given by

$$\sigma^2 = \frac{8gh_0}{a^3}.$$

5. For a function

$$\zeta = \int_1^{\infty} \frac{e^{-iz\eta}}{\sqrt{\eta^2-1}} d\eta,$$

prove that

$$\lim_{z \rightarrow 0} \left( \zeta \frac{d\zeta}{dz} \right) = 1.$$

Work out the effect of a temporary source at a distant point and point out the 'tail' phenomenon.

6. State and prove Green's Law for a canal of variable section. Discuss the limitations of the law.

7. Investigate the tides on a circular sheet of water of uniform depth rotating uniformly about its centre. Prove that the path of any particle is an ellipse whose major axis lies in the direction of the radius vector.

8. Develop, after Laplace, the theory of tides on a rotating globe, mentioning clearly the approximations introduced at different stages, and get the equation giving the height  $\zeta$  in the form

$$\frac{\partial}{\partial \mu} \left( \frac{1-\mu^2}{f^2-\mu^2} \frac{\partial(\zeta-\bar{\zeta})}{\partial \mu} \right) = -\beta \zeta$$

where  $\bar{\zeta}$  is the equilibrium height,  $h$  the depth.

$$\mu = \cos \theta, f = \sigma/2\omega, \beta = 4\omega^2 a^3 / gh,$$

9. Indicate Hough's solution of Laplace's Equation of tides and show that for free symmetrical oscillations, the frequency is given by the transcendental equation

$$L_n = \frac{1}{5 \cdot 7^2 \cdot 9} \frac{1}{9 \cdot 11^2 \cdot 13} = 0$$

where

$$L_n = \frac{f^2-1}{n(n+1)} + \frac{2}{(2n-1)(2n+3)} - \frac{\alpha_n}{\beta},$$

and

$$\alpha_n = 1 - \frac{3}{2n+1} \frac{\rho}{\rho_0}.$$

(TIDES AND SURFACE WAVES—SECOND PAPER)

EIGHTH PAPER

Examiners—{ DR. S. C. KAR, M.A., PH.D.  
,, J. GHOSH, D.Sc.

The questions are of equal value

Attempt six questions only

1. Work out the problem of free oscillations of water in two dimensions across a channel whose cross-section consists of two straight lines inclined at an angle of  $45^\circ$  to the vertical.

2. Investigate the Cauchy-Poisson problem of two-dimensional surface waves produced in deep water by a local disturbance in the form of an initial elevation confined to the immediate neighbourhood of the origin.

3. Investigate the gravitational oscillations of an ocean of uniform depth covering a symmetrical spherical nucleus.

4. Obtain the velocity of a train of progressive waves on the surface of separation of two liquids when both gravity and capillarity are taken into account. Discuss the results with reference to large and small wavelengths and to the group-velocity.

5. Discuss the small oscillations of a spherical drop of liquid surrounded by an infinite mass of a liquid of different density, on the assumption that there is a capillary force at the surface of separation.

6. A horizontal periodic force of constant amplitude acts uniformly on an infinite mass of viscous liquid of uniform depth. Discuss the corresponding wave-motion.

7. Shew that a solitary wave of elevation may travel along a uniform canal of depth  $h$  and that velocity of progression of such a wave would be equal to  $\sqrt{g(a+h)}$ , where  $a$  is the height of the wave-summit above the mean level.

8. A periodic pressure

$$= \frac{P}{\pi} \cdot \frac{b}{b^2 + x^2} \cdot e^{i\tau}$$

acts on the surface of a canal of infinite depth along its whole length. Find the oscillations produced, capillarity being ignored.

9. Deduce, after Rayleigh, the expression for the group-velocity of a set of waves.

Illustrate the dynamical significance of group-velocity by reference to the case of waves progressing through deep water.

10. Prove that a ship moving with velocity  $c$  across the surface of water of depth  $h$  should produce wave-patterns given by equations of the form

$$\frac{p}{a} \tanh \frac{a}{p} = \frac{c^2}{gh} \cos^2 \theta.$$

Discuss the case of  $c^2 > gh$ .

## (GEODESY AND GEOPHYSICS—FIRST PAPER)

### SEVENTH PAPER

Examiners—{ DR. S. GHOSH, D.Sc.  
PROF. N. R. SEN, D.Sc., PH.D.

Not more than six questions are to be answered, of which Q. 3 must be one

1. Prove that for a large number of equally good observations, the probability that an error lies between  $x$  and  $x+dx$  is given by  $f(x) dx$ , where

$$f(x) = \frac{k}{\sqrt{\pi}} e^{-k^2 x^2}$$

and interpret  $k$ .

Hence deduce the principle of least squares.

2. Four observations of equal weight give the following equations :—

$$\begin{aligned}x+y+z &= 7, \\x+y-3z &= -6, \\x+2y-z &= 3, \\3x-y+z &= 4.\end{aligned}$$

Find the weights of the best values of the quantities  $x, y, z$ .

3. State and prove the principal properties of the stereographic projection.

A map of the world is to be constructed in three parts, two circumpolar on the stereographic projection and one equatorial on the Mercator's projection. The circumpolar maps are to be such that the scale in latitude  $\alpha$  is the same as that of the other map at the equator and the scale at the bounding latitude  $\phi$  is to be the same for all the maps. Prove that

$$2 \tan \phi (1 + \sin \alpha) = \sin \alpha (2 + \sin \alpha).$$

4. Describe the main points that are to be noted in conducting a geodetic survey.

What are the corrections to be made in measuring the base line?

5. State and prove Legendre's theorem by which a spherical triangle can be solved with the help of an auxiliary plane triangle.

6. Prove that the difference in latitude between two stations on the earth's surface is given by

$$-\Delta\phi'' = \frac{s \cos \alpha}{R_M \text{ arc } 1''} + \frac{s^2 \sin^2 \alpha \tan \phi}{2NR_M \text{ arc } 1''} - \frac{s^2 \sin^2 \alpha \cos \alpha (1 + 3 \tan^2 \phi)}{6N^2 R_M \text{ arc } 1''},$$

where  $s$  is the linear distance between the stations,  $\alpha$  the azimuth,  $R_M$  the radius of curvature of the meridian at the middle point between the parallels, and  $N$  the radius of the sphere touching the earth along the line joining the stations.

7. Describe briefly the various methods used for the determination of the absolute and the relative values of  $g$ .

8. Describe the method of geometric levelling and obtain a formula for the determination of the difference of heights between two stations by this method.

9. Describe Eötvös torsion balance and shew how the second differential coefficients of the earth's potential can be measured by it.

## (GEODESY AND GEOPHYSICS—SECOND PAPER)

### EIGHTH PAPER

Examiners—{ DR. S. GHOSH, D.Sc.  
,, S. C. KAR, M.A., PH.D.

Six questions are to be answered

1. Assuming that the interior of the earth consists of strata of homogeneous matters of nearly spherical shape, prove that

$$-\frac{\epsilon}{r_1} \int_0^{r_1} \rho' a'^2 da' + \frac{1}{5r_1^3} \int_0^{r_1} \rho' \frac{d}{da'} (a'^5 \epsilon') da' + \frac{r_1^2}{5} \int_{r_1}^a \rho' \frac{d\epsilon'}{da'} da' = -\frac{\omega^2 r_1^3}{8\pi f},$$

where  $\rho'$  is the density of the stratum whose compression is  $\epsilon$  and mean radius  $r_1$ ,  $a$  the mean radius of the other surface,  $f$  the constant of gravitation, and  $\omega$  the angular velocity of the earth

2. Obtain Radau's transformation of Clairaut's differential equation

$$\frac{d^2\epsilon}{dr^2} + \frac{6pr^2}{s(r)} \frac{d\epsilon}{dr} - \left(1 - \frac{pr^2}{s(r)}\right) \frac{\epsilon}{r^2} = 0.$$

What are the advantages of the transformed equation? How has it been used by Darwin for the determination of the moment of inertia of the earth?

3. Describe the methods of determining the rigidity of the earth.

4. Describe Bernoulli's equilibrium theory of tides. Is the theory satisfactory?

5. Assuming that the moon's orbit is circular and coincident with the plane of the earth's equator, discuss the tidal oscillations in canals coincident with (1) a meridian, and (2) a parallel circle of the earth.

6. Describe briefly the theory of seismic instruments. Give a short sketch of the principal types of seismometers in use.

7. What are seismic rays? Shew that the differential equation of the path of a seismic ray inside the earth is

$$d\theta = \frac{ad\rho}{\rho \sqrt{\phi^2(\rho) - a^2}},$$

where  $\rho = \frac{r}{r_0}$ ,  $\phi(\rho) = \nu\rho$ ,  $r_0$  the radius of the earth,  $\nu$  the ratio of the refractive indices of layers of radii  $r$  and  $r_0$ , and  $a$  a constant.

What is the angle of emergence? How is it measured?

8. Prove Clairaut's theorem

$$g = g_e \left\{ 1 + \left( \frac{5}{2}m - \epsilon \right) \sin^2 \phi \right\}$$

## PHYSICS

### FIRST PAPER

*Examiners*— $\left\{ \begin{array}{l} \text{PROF. D. M. BOSE, M.A., B.Sc., Ph.D.} \\ \text{DR. D. N. MALLIK, B.A., Sc.D.} \\ \text{MR. DURGADAS BANERJEE, M.Sc.} \\ \text{DR. B. B. RAY, D.Sc.} \end{array} \right.$

*The questions are of equal value*

*Not more than six questions are to be attempted*

1. A material particle subject to gravity is constrained to move in a vertical plane on the surface of a sphere. Deduce the motion of the particle, and discuss the nature of the force of constraint acting on it.

2. A material particle subject to a given force is viewed from a system of co-ordinates rotating with a uniform angular velocity. Deduce the equations of motion of the particle, and discuss the nature of the various terms which appear in them.

What application has been made of these equations to terrestrial problems?

3. Deduce the conditions for equilibrium of a rigid body under the action of any number of forces.

Discuss the nature of a force couple, and show how it is represented analytically and vectorially.

4. Deduce Lagrange's form of the equations of motion of a system of material particles. What will be their form in the case of a material particle moving under a central force?

5. From the dynamical equations of elasticity, deduce those which are applicable to liquids in motion, explaining the symbols which you use.

6. Discuss theoretically the preferential condensation of supersaturated vapour on dust particles and on electrically charged nuclei.

What applications have been made of the results obtained?

7. Explain clearly the principle on which a diffusion pump works, and describe its essential parts. How would you use such a pump to produce high vacuum?

8. Deduce an expression for the mean free path of a system of gas molecules. How can you experimentally verify the formula deduced above?

9. Write a short note on the scattering of light by liquids due to density fluctuation.

Discuss the phenomena of critical opalescence.

10. Discuss the assumptions underlying the following statistical methods :

(a) classical, (b) Bose-Einstein, and (c) Fermi Dirac.

## SECOND PAPER

Examiners— $\left\{ \begin{array}{l} \text{DR. SNEHAMAY DATTA, D.Sc.} \\ \text{MR. JOGESCHANDRA MUKHERJEE, M.A.} \\ \text{,, DWIJENDRAKUMAR MAJUMDAR, M.A.} \end{array} \right.$

*The questions are of equal value*

*Only six questions are to be attempted*

1. Describe an accurate method for the determination of the dilatation of crystals.

Show that the linear dilatation in any direction in a crystal is

$$\lambda_1 \cos^2 \alpha + \lambda_2 \cos^2 \beta + \lambda_3 \cos^2 \gamma,$$

where  $\lambda_1, \lambda_2, \lambda_3$  are the dilatations along the principal axes and  $\alpha, \beta, \gamma$  are the angles which the direction makes with the axes of reference.

2. Show how the classical law of equipartition of energy fails to explain the atomic heats of solids.

Explain Debye's theory in this connection, and prove his formula for atomic heats at constant volume.

3. Deduce from Van der Waal's theory the value of the constant ratio ' $k$ ' between the lowering in temperature and the difference in pressure on the two sides of a porous plug. Explain the term 'Temperature of Inversion'. State its significance in the problems of liquefaction of gases.



4. Prove the van't Hoff Isochore, viz —

$$\frac{d \log k}{dT} = \frac{Q_v}{RT^2},$$

where  $k$  = equilibrium constant and  $Q_v$  = the heat of reaction taking place in the solution.

Hence formulate a method of calculating the molecular weight of a dissolved substance depending upon the variation of the solubility of the solute with temperature.

5. Give Einstein's proof of Planck's law of radiation, and comment on the significance of the coefficients involved

6. State the various defects observable in the image formed by an ordinary lens, and explain, in detail, how they arise.

Deduce the conditions necessary for obtaining an image reasonably free from distortion.

7. Describe some form of spectrophotometer, and explain how it may be used to measure the coefficient of absorption of a solution.

8. Describe Michelson's Stellar Interferometer, and explain its working fully.

9. Explain, with the help of examples, the difference between the Fresnel and Fraunhofer type of diffraction pattern.

A point source of light is viewed through a glass plate dusted with lycopodium. Describe and explain the phenomena observed.

### THIRD PAPER

Examiners— $\left\{ \begin{array}{l} \text{MR. P. C. MAHALANOBIS, M.A.} \\ \text{„ SUSILKUMAR ACHARYYA, M.Sc.} \\ \text{DR. BRAJENDRANATH CHUCKERBUTTI, D.Sc.} \end{array} \right.$

*The questions are of equal value*

*Answer ANY SIX questions*

1. Explain the difference between Diamagnetic, Paramagnetic and Ferromagnetic substances, noting characteristic tests for distinguishing them.

2. Investigate the energy density in a dielectric medium placed in an electrostatic field. Find the effect of introducing an uncharged conductor in the field.

3. In a network of conductors the current is flowing steadily, and there is no accumulation of electricity at any point. Discuss the rate of generation of heat in the network.

A wire forms a regular hexagon, the resistance of each side of which is 1 ohm. Each angular point is joined to the centre by wires of resistance 1 ohm each. Shew that the resistance of the framework is 0.8 ohm when the current enters at one angular point and leaves by the opposite angular point of the hexagon.

4. Find the dimensions of capacity in electrostatic and electromagnetic units

A condenser consisting of two parallel plates 80 centimetres square with an air-gap of one millimetre between the plates is, by means of a commutator, connected to a cell and discharged through a galvanometer 60 times a second,

giving the same deflection as the same cell connected to the galvanometer through 25 megohms. What value does this rough experiment give for the quantity  $c$ ? How might the experiment be improved?

5. Discuss critically the fundamental laws of the electromagnetic field, laying emphasis either on the theoretical or the experimental aspects of the problem.

6. A train of electromagnetic waves travelling in vacuum is incident upon a plane surface of a dielectric medium and is reflected and refracted. If the waves are polarised in the plane of incidence find the relative intensity of the reflected beam.

7. Briefly indicate the theory of the propagation of an electromagnetic disturbance. Explain fully how the wave-length of such a disturbance may be measured experimentally.

8. Calculate the value of the coefficient of absorption of a metal for electromagnetic waves.

The specific resistance of copper is  $1.6 \times 10^{-6}$  ohms. Find its coefficient of absorption for light of wave-length  $5896 \times 10^{-8}$  cms.

9. Write short notes on *any four* of the following :—

- (1) Oscillograph.
- (2) Standard cells.
- (3) Choke coil.
- (4) Displacement current.
- (5) Poynting vector.
- (6) Electrical images.
- (7) Electric dipole.
- (8) Peltier effect.
- (9) Hot-wire ammeter.

#### FOURTH PAPER

Examiners— $\left\{ \begin{array}{l} \text{SIR. C. V. RAMAN, KT., M.A., D.Sc., Ph.D.,} \\ \text{F.R.S., N.L.} \\ \text{MR. CHARUCHANDRA BHATTACHARYYA, M.A.} \\ \text{DR. S. K. MITRA, D.Sc.} \end{array} \right.$

*The questions are of equal value*

*Answer ANY SIX questions*

1. Find an expression for the radiation from an accelerated electron. Hence derive Thompson's formula for the energy of X-radiation scattered by light atoms.

2. Describe experiments which show that the mass of the electron is a function of its velocity, and discuss the significance of the result.

3. Describe experiments and measurements by which the physical nature of gamma radiation has been demonstrated. State the views at present held regarding the origin of gamma radiation.

4. Sketch the arrangements adopted in the Stern-Gerlach experiment, and discuss, in detail, its theory and the results obtained.

5. What is the Raman Effect? Describe the experiments in which it is observed and discuss its theory.

6. Discuss the origin of characteristic X-radiation, and explain what light X-ray spectra throw on the problem of atomic structure.

7. State the Pauli Exclusion Principle, and show how it leads to an explanation of the periodic classification of the chemical elements.

8. Develop the analogy between Fermat's principle in optics and Hamilton's principle in dynamics, and deduce therefrom the Schrödinger wave-equation.

\* Calculate the wavelength associated with a 150-volt-electron.

9. What conclusions of importance have been arrived at by experiments on the collisions of alpha particles with light atoms? Explain fully how these conclusions have been reached.

10. What is anomalous dispersion? Describe an experiment illustrating the phenomenon and comment on its explanation from the standpoint of electron theory

## FIFTH PAPER

### GROUP A

#### (THEORY OF RELATIVITY)

Examiners— { MR. P. C. MAHALANOBIS, M.A.  
 { PROF. SATYENDRANATH BOSE, M.Sc.

*The questions are of equal value*

*Answer ANY FIVE*

1. Give a short account of the various theories postulated to explain aberration, and show how the theory of relativity furnishes the most satisfactory solution of the problem.

2. Explain Minkowski's Space-Time Continuum and write down the equations of electromagnetism in the tensor form. Hence show their invariance towards the Lorentz transformation.

3. Discuss the principle of conservation of mass energy and momentum from the relativity standpoint. How does the theory explain the variation of mass with velocity?

4. Discuss the conception of 'Force' from the standpoint of the theory of relativity. Why is it that the space is necessarily curved in Einstein's theory?

5. Discuss the motion of Mercury from the standpoint of the generalised relativity theory; show how it represents an actual advance over the classical ideas of Newton.

6. Apply the principle of stationary action to deduce the fundamental gravitational equations.

7. Give a short account of the attempts that have been made to include gravitation and electromagnetism in one unitary theory.

8. Deduce an expression of the Riemann Christoffel tensor, and deduce some of its important properties. Show that when this tensor vanishes, the space-time continuum is Galilean.

9. Give a brief account of Lemaitre's theory of the expanding universe.

## GROUP B

## (SPECTROSCOPY)

Examiners— { DR. SNEHAMAY DATTA, D.Sc.  
 PROF. M. N. SAHA, D.Sc., F.R.S.

*The questions are of equal value*

*Answer ANY FIVE questions*

1. What is 'Quantum Defect'?

How would you calculate it for orbits of the penetrating type?

2. Explain how the nature of the spectroscopic terms is determined by the distribution of the electrons in the atom. Hence discuss the emission spectrum of calcium.

3. Discuss the Ornstein and Berger's rule about the intensity ratios of the various components of a multiplet, and give a short account of the experimental procedure by which the rule has been verified.

4. Account for the spectrum of Hydrogen atom according to Schrödinger's Wave Mechanics.

5. Discuss critically the various methods of studying the infra-red radiations.

6. Describe the theory of the rotation-vibration spectra of molecules.

How can you determine the heat of dissociation of molecules from a study of the band spectrum?

7. Write a short essay on 'Optical excitation of metallic vapours,' with special reference to the works of Wood, Füchtbauer, Franck, and Cario.

## GROUP C

## (ELECTRICAL OSCILLATIONS AND WIRELESS)

Examiners— { PROF. S. K. MITRA, D.Sc.  
 MR. C. AUSTIN.

*The questions are of equal value*

*Only FIVE questions are to be attempted*

1. What is the difference between the natural frequency and the resonant frequency of an oscillatory circuit?

Deduce an expression for natural frequency of an oscillatory circuit in terms of resistance, capacity, and inductance.

2. What do you mean by the logarithmic decrement of a circuit?

Describe, in detail, an experimental method of determining the same.

3. Draw a diagram showing the relations of currents and voltages concerned in a valve under conditions of high efficiency working. Deduce an expression for the value of the mutual inductance necessary to sustain oscillations in a valve oscillator.

4. Prove that the electronic current flowing between a large plane hot cathode and a parallel anode is given by

$$\frac{1}{9\pi} \left( \frac{2e}{m} \right)^{\frac{1}{2}} \frac{V^{\frac{3}{2}}}{x^2},$$

where  $V$  is the potential difference and  $x$  the distance between the cathode and the anode.

In the expression, the current is independent of the temperature of the cathode. In actual practice, however, one often finds it increasing with the temperature. Explain this.

5. A broadcasting station uses a total input power on the set of 15 K.W. for all purposes except studio control. It consists of one valve master oscillator, one magnifying stage, high power modulation, valve rectifiers, and necessary auxiliaries. Allocate to the different parts of the gear the power each will require, and give an estimate of the aerial power under average efficiency condition.

6. Explain the use of the triode valve as high frequency rectifier. Draw circuit diagrams for (a) anode bend rectification, (b) cumulative grid rectification. Explain carefully the function of the valve in each case.

7. At what rate is heat developed in the plate of a valve operating as a modulator at 1,000 volts, 30 m/a? It is proposed to use the valve as an oscillator. What safe power can be used at the same voltage?

Draw a sketch of a water-cooled valve (through electrode), showing also external cooling arrangement. What safety devices are necessary?

8. Explain the use of a simple frame aerial as direction finder. What modifications would you make in the above to determine the 'sense' of the direction?

What is meant by the 'vertical effect' in a D.F. system? How would you eliminate the same?

## GROUP D

### (X-RAYS)

Examiners— { DR. B. B. RAY, D.Sc.  
MR. K. S. KRISHNAN, M.Sc.

*The questions are of equal value*

*Answer ANY FIVE questions*

1. Various familiar optical experiments have been successfully performed with X-rays. Describe some of them and comment on their theoretical significance.

2. State the different methods in use for the X-ray analysis of crystal structure, and describe one of them in full detail, with reference to the case of some particular crystal.

3. What light have recent X-ray studies thrown upon the molecular structure of liquids?

4. Explain the meaning of the terms 'atomic structure factor' and 'molecular structure factor.' State how they may be experimentally determined.

5. Discuss the theory of the spatial distribution of photo-electrons as produced by X-rays in passing through matter.

6. Designate the various lines in the  $L$  series of some particular element, and draw the energy-level diagrams showing the origin of the lines. How are the emission and absorption spectra of an element in the  $L$  region related to each other?

7. What is the Compton effect? Develop its theory and indicate the part it has played in modern physics.

8. Describe the methods which have been developed by Siegbahn and others for the precise measurement of X-ray wavelengths, with special reference to the production and measurement of very soft radiation.

## APPLIED PHYSICS

### FIRST PAPER

#### FIRST HALF

Examiners— { Mr. S. K. ACHARYA, M.Sc.  
., P. C. MAHANTI, M.Sc.

*The questions are of equal value*  
Only THREE questions are to be attempted

1. Explain the principle of images as applied in electro-statics.

An infinite plate with a hemispherical boss of radius ' $a$ ' is at zero potential under the influence of a point charge ' $e$ ' on the axis of the boss distant ' $f$ ' from the plate. Find the surface density at any point on the plate, and show that the charge is attracted towards the plate with a force which is given by

$$\frac{e^2}{4f^3} + \frac{4e^2a^3f^3}{(f^4 - a^4)^2}.$$

2. Write a short essay on :—

'Circumstances affecting magnetisation, bringing out the main points relating to composition, dimensions, temperature, field and stress.'

3. Find the dimensions of inductance and electromotive force on both the electrostatic and electromagnetic systems.

What important relation involving  $u$  and  $k$  can be deduced from such expressions?

Work out the theory of a method by which the capacity of a condenser can be measured in absolute units.

4. Discuss briefly, the working principle and the construction of a moving soft-iron type voltmeter.

A 250-volt moving-coil instrument has a resistance of 20,000 ohms. The coil has 80 turns of wire, an effective length of 3.2 cms., and a width of 2.5 cms. At the full scale deflection the control spring exerts a torque of 0.45 gram-cm. Calculate the strength of the magnetic field in which the coil moves.

5. Describe, with sketches, the construction of a modern type of alternating-current energy-meter. Give the theory of the action of the instrument, and show how compensation is effected for temperature, friction, and power-factor.

Describe how such an instrument is calibrated.

## SECOND HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. K. P. CHOKSEY, A.M.I.E.E., Assoc.} \\ \text{A.I.E.E., A.M.I.E.E.} \\ \text{,, P. C. MAHANTI, M.Sc.} \end{array} \right.$

*Only THREE questions are to be attempted*

1. (a) Describe any graphical method for determining the grading of a starter for a D.C. series motor.

(b) A 2-pole, shunt-wound motor has an armature resistance of 0.05 ohm and 60 armature conductors. The armature torque is 80 lb.-inches, when the applied P.D. is 100 volts and the flux per pole is 5 megalines. Calculate the armature current and the speed of the machine.

2. (a) Deduce a formula for the output co-efficient of a D.C. generator in terms of the electric and magnetic loading from the fundamental equation for the e.m.f. induced in a conductor linking with a magnetic field.

(b) A generator has a mean magnetic flux density of 8.0 kilolines per sq. cm. and an electric loading of 250 ampere wires for sq. cm. of armature periphery. Calculate the output coefficient of the machine if the diameter of the armature is 46 cms. and its length is 20 cms.

3. (a) Explain fully, with a diagram of connections, the action of any good type of an automatic reversible battery booster.

(b) A Lancashire battery booster is adjusted so that the generator produces no e.m.f. when the main generators are giving 600 amps. and produces 50 volts when they are giving 620 amps. What is the effect of altering (1) the diverter only, (2) the potentiometer regulator only, so that the current in the coil is reduced to  $\frac{4}{5}$  of its value?

4. (a) Show how the losses in a dynamo armature can be measured by the retardation method. Give the necessary theory.

(b) What errors would you expect to arise in using results obtained by this method for pre-determining the efficiency of the machine under load conditions?

5. (a) Draw a neat diagram of the D.C. layout of a modern sub-station with mercury vapour rectifier supplying power to an electric railway.

(b) Explain the construction of one form of overload and reverse current cutout, giving briefly the design for an instrument to carry a current of 200 amps. at 1,500 volts.

## SECOND PAPER

*The questions are of equal value*

*Only THREE questions are to be attempted from EACH half*

## FIRST HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. J. N. MUKHERJI, O.B.E.} \\ \text{PROF. P. N. GHOSH, M.A., Ph.D., Sc.D.,} \\ \text{F.Inst.P.} \end{array} \right.$

1. Discuss fully the effects of (a) magnetic saturation, (b) hysteresis, on the shape of the current wave in a choking coil when a simple harmonic voltage is impressed on the coil.

2. A 220 volt 1 KW motor has eight poles and the total flux per pole is 12.5 megalines and 9,000 ampere turns are required to set up this flux. Ascertain the time required for 90 per cent. excitation and full excitation.

3. (a) Find an expression for the capacity of two parallel lines separated from each other, placed high above the ground.

(b) Evaluate in microfarads the capacitance per mile of a transmission line placed 3 ft. apart, each live wire being 0.285 inch in radius.

4. A series circuit consists of a resistance 10 ohms and inductance 0.2 henry. If the expression for the applied e.m.f. is given by

$e = 100 \sin 300t + 20(900t + 60^\circ) + 10 \sin (1500t + 150^\circ) + 5 \sin (2100t + 300^\circ)$   
calculate the value of—

(a) the current flowing through the circuit (Effective value);

(b) the total power consumed in the circuit;

(c) the resultant power factor of the circuit.

5. The load on a certain 110 volt 60 cycle alternator consists of one hundred 40 watt lamps and a 10 H.P. induction motor which operates at 85 per cent. efficiency and with a lagging power factor of 0.8.

(a) Calculate the current supplied by the alternator and its power factor;

(b) What will be the horse-power of the engine required to drive the alternator, if the alternator is assumed to be of 86 per cent. efficiency?

## SECOND HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. K. P. CHOKSEY, A.M.I.E.E., Assoc.} \\ \text{A.I.E.E.E., A.M.I.E.E.} \\ \text{PROF. P. N. GHOSH, M.A., Ph.D., Sc.D.,} \\ \text{F.Inst.P.} \end{array} \right.$

1. Explain what is meant by 'Voltage Regulation' of an alternator. How can one calculate it from the design data?

A three phase star connected generator has the following data :—

Output—5,000 K.V.A.,

Line voltage—6,600.

No. of Poles—30,

R.P.M.—240,

Resistance per phase—0.069 ohms,

Leakage inductance per phase—4.22 millihenries.

What will be the induced voltage at 0.8 power factor?

2. (a) Two 100 K.V.A. single phase transformers are connected in parallel on both primary and secondary sides. One transformer has an ohmic drop of 0.5 per cent. and a reactive drop 8 per cent. of the voltage on the full load. The other has corresponding drops of 0.75 per cent. and 4 per cent. respectively. How do they share the following loads?—

(1) 120 K.W. at .6 lagging;

(2) 200 K.W. at unity power factor.

(b) Draw an outline sketch of any type of high tension cubicle used for supplying power to consumers, showing the instruments and safety devices employed on it.



3. A synchronous motor is working on a 500 volt line. Its synchronous impedance is 10 ohms and resistance is 1.5 ohms.

Find the maximum load the machine would be capable of carrying and the percentage excitation and also the minimum current and the motor e.m.f. for 10 K.W. output.

4. The following readings are taken on a 16 H.P. 6 pole three phase induction motor at 400 line volts 50 cycle :—

		Line Volt.	Line Amps.	P.f.
No Load	...	400	10.8	0.24
Standstill	...	100	22.4	0.52
		150	35.3	0.55

The stator is star connected and has a resistance of 0.7 ohm per phase. Construct the circle diagram, and from it find the current, power factor, torque at full load, and the ratio of maximum torque to that at full load.

5. Find the voltage and current of one secondary phase of a transformer feeding a 6 ring synchronous convertor loaded to 600 K.W. at 400 volt on the commutator side; diametral tapings are used. Figures for efficiency and power factor are 95 per cent. 0.85.

### THIRD PAPER

*The questions are of equal value*

#### FIRST HALF

Examiners—{ PROF. S. N. BOSE, M.Sc.  
MR. S. K. ACHARYYA, M.Sc.

*Only THREE questions are to be attempted*

1. Deduce the following relations :—

$$\frac{\partial C_v}{\partial v} = T \frac{\partial^2 p}{\partial T^2}$$

$$\frac{\partial C_p}{\partial p} = -T \frac{\partial^2 v}{\partial T^2}$$

and show that for a substance, obeying Vander Waal's equation of state, the specific heat at constant volume is independent of volume, but the specific heat at constant pressure is not independent of pressure.

2. Explain the general principle underlying the liquefaction of gases. Describe a method of liquefying either air or hydrogen. Mention some of the uses of liquid air.

3. State and explain Stefan's Law. Deduce thermodynamically the law. How would you experimentally determine the value of the Stefan-Boltzmann constant, ' $\sigma$ '?

Wherein lies the difference between the Stefan law and the Wien's law?

4. Describe the Joule-Thomson 'porous-plug' experiment, and show that the change in temperature produced is given by the expression.

$$\Delta\theta = -\frac{\left(\frac{\partial v}{\partial \theta}\right)_p}{C_p} \Delta p.$$

What information may be obtained from the experiment as to the properties of the gas used, or as to the absolute scale of temperature?

5. Discuss the system water and common salt from the Phase rule standpoint.

6. State Planck's Law of distribution of energy in the black-body spectrum, and describe how it has been experimentally verified and found to be superior to the Laws of Rayleigh-Jeans or Wien.

## SECOND HALF

Examiners—{ PROF. D. M. BOSE, M.A., B.Sc., PH.D.  
MR. J. M. BOSE, M.A., B.Sc.,  
BARRISTER-AT-LAW.

Only THREE questions to be attempted, of which not more than two from any group

## GROUP A

1. Deduce Clausius's Virial Theorem, and discuss some of its applications. Describe some methods of estimating the diameters of gas molecules.

2. Explain, with illustrations, what is meant by the principle of equipartition of energy. Deduce an expression for the specific heat of an elastic solid.

3. Give an account of the different methods of producing high vacuum.

## GROUP B

Not more than two questions to be attempted

1. Establish the equations

$$\frac{p}{y} = \frac{M}{I} = \frac{E}{R}.$$

Find the stress induced in a strip of spring steel  $\frac{1}{16}$  inch thick by bending it round a drum 2' 6" diameter.

2. A plate girder 48 inches deep having equal flanges and a span of 100 ft. is built into two walls so that the ends are horizontal and initially at the same level. One of the walls settles a distance 3 inches without disturbing the horizontality of the ends.

Find the maximum stress induced in the girder ( $E=13,500$ ).

3. Calculate on Euler's theory the greatest thrust which an iron bar 1 metre long, whose section is a square of 1 cm., can bear without bending. ( $E=2 \times 10^9$ .)

## 4. Establish the equations

$$\frac{q}{\gamma} = \frac{T}{J} = \frac{c\theta}{l}$$

for the torsion of a circular shaft.

Find the least diameter of the shaft in order that the stress may not exceed 4 tons per sq. in. when transmitting 1,600 horse-power at 25 revolutions per minute.

## FOURTH PAPER

## FIRST HALF

Examiner—MR. P. C. GANGULY, B.Sc.

*The questions are of equal value*

*Attempt THREE questions only*

1. Write down the characteristic law of a gas, and determine the relation existing between the gas constant  $R$  and the specific heats.

Give the general form of the energy law for a gas and apply it to the following case :—

A four-stroke oil engine has a cylinder 12-inch diameter and 18-inch stroke, and runs at 150 R.P.M. Air is compressed from 13.5 lb./in<sup>2</sup> abs. at 300°C. abs. to 550 lb./in<sup>2</sup> abs., the law of compression being  $PV^{1.35} = C$ . Find the total amount of heat discharged to the jacket water per min.  $R=96$  and  $K_v=0.169$ .

2. A multiple expansion engine receives 4.25 lb./sec. of dry saturated steam at 120 lb./in<sup>2</sup> abs., expands it adiabatically to 20 lb./in<sup>2</sup> abs., and exhausts it at 5 lb./in<sup>2</sup> abs. Sketch the  $PV$  and  $T\phi$  diagrams for the cycle. Estimate the ideal horse-power developed, and compare the thermal efficiency of the engine with the efficiency of the Rankine cycle between the same pressure limits.

3. Describe the air cycle used as a standard of comparison for Diesel engines, and show that its efficiency is

$$1 - \frac{1}{r^{\gamma-1}} \left\{ \frac{\rho^{\gamma-1}}{\gamma(\rho-1)} \right\}$$

where  $r$  is the compression ratio and  $\rho$  is the ratio of the volume at cut off to the clearance volume.

A Diesel engine has a relative efficiency of 0.5 on the brake. If the compression ratio is 13.75 and the expansion ratio 7.5, find the consumption of oil in lb. per B.H.P. per hour. The lower calorific value of the oil is 10,500 C.H.U./lb.

4. 'In a heat engine, reversibility is essential to perfection.' Discuss. Describe the cycle of operations in the Stirling air engine. Compare the efficiencies of (a) a Stirling engine with a perfect regenerator in which the maximum pressure is 140 lbs. per sq. inch abs. and minimum pressure 15 lbs. per sq. inch abs., and limits of temperature 400°C. and 21°C., and (b) a perfectly reversible steam engine working between the same limits of pressure.

5. In a two-stage adiabatic compressor find the ratios of compression in the two stages when the work done is a minimum, and the efficiency.

## SECOND HALF

Examiners—{ PROF. S. K. MITRA, D.Sc.  
MR. C. AUSTIN.

*The figures in the margin indicate full marks*

*The number of questions attempted should be such that the total marks do not exceed 50*

1. What are the relations between the following units: Bel, néper, TU, BI, B.S.M., M.S.C.? What is the value usually assigned to zero level? 20

Draw a neat diagram showing a three stage low frequency transformer coupled amplifier, indicating on it—

- (1) the type of valves used.
- (2) the transformer ratios,
- (3) the gain per stage in decibels.

2. What is meant by the logarithmic decrement of a circuit? 10  
Deduce an expression for it in terms of the electrical constants of the circuit.

If the logarithmic decrement of a circuit be 0.005 how many oscillations will the circuit make before its amplitude falls to 1 per cent. of its initial value?

3. Contrast the advantages and disadvantages of High Power and Low Power modulation in radio-telephony transmitter. 10

4. Draw a diagram to show how a valve can be used to generate 20  
high frequency oscillations in a circuit. Deduce the condition for the maintenance of the oscillations, and draw a vector diagram to show the relations between the currents and voltages in the various branches of the circuit.

Under what conditions will the output from the circuit be a maximum?

5. A marine transmitter is to operate on 300, 600, and 800 metres. 10  
It is proposed to use a .008 mfd. condenser in the main closed circuit on 600 metres. Wave change to be carried out by means of series and parallel condensers. What value should these additional condensers be? How will the efficiency of the circuit be affected by this method of wave change?

## CHEMISTRY

## ORGANIC

## GENERAL PAPER

<i>Examiners—</i>	{	PROF. P. C. MITTER, M.A., PH.D.
		DR. M. N. GOSWAMI, M.A., Dr.Es.Sc.
		„ A. C. SARKAR, M.A., PH.D.
		„ P. NIYOGI, M.A., PH.D.
		„ M. Q. KHUDA, D.Sc.
		MR. U. P. BASU, M.Sc.
		„ B. C. RAY, M.Sc.
		PROF. H. K. SEN, M.A., D.Sc., D.I.C.
		DR. B. K. SINGH, M.A., D.Sc.
	{	MR. R. N. SEN, M.A., M.Sc.

*The questions are of equal value*

*Attempt six questions only*

1. How are aliphatic unsaturated acids containing only one double bond synthesised? Describe their characteristic reactions, and show how their properties are affected by the position of the double bond.

2. Discuss the industrial applications of (a) acetylene, and (b) phenol.

3. What are the lactones? Describe their methods of preparation and properties.

4. How are the following substances prepared?—

- (a) Saccharin.
- (b) Benzilic acid.
- (c) Phorone.
- (d) Isonitroso camphor.
- (e) Isoquinoline.
- (f) Phenyl propiolic acid.

5. Describe the various methods for the synthesis of quinoline derivatives.

Establish the constitution of—

- (a) Eosine,
- and (b) Camphoronic acid.

Write short notes on :—

- (a) Michael's reaction.
- (b) Catalytic hydrogenation.
- (c) Florescence in organic compounds.

8. What are the evidences in favour of the oxide ring in monosaccharoses?

## ORGANIC—SPECIAL

## FIRST PAPER

*The questions are of equal value*

*Attempt FIVE questions only*

1. Give an account of the antimalarials which have been prepared as a result of the study of the physiological effects of the various groupings and nuclei present in quinine.
  2. Write an essay on the valency of carbon, with special reference to the equivalence of the carbon bonds, the theory of double bond, theory of free valencies, and theories of abnormal valency.
  3. What is Knoevenagel's reaction? Give a critical review of the course of the reaction, and discuss its utility in the formation of unsaturated acids.
  4. Describe the preparation, properties, and reactions of aliphatic keto-nic acids.
  5. Discuss fully the constitution of maltose.
  6. Give a brief account of the present state of our knowledge of the chemistry of chlorophyll.
  - 7 How are the following substances prepared?—
    - (a) Asparagine.
    - (b) Aceto succinic ester.
    - (c) Thio-indigo.
    - (d) Arseno benzene.
    - (e) Cyclohexenyl acetic acid.
    - (f) Dehydracetic acid.
- 

## SECOND PAPER

*The questions are of equal value*

*Attempt FIVE questions only*

1. Give a short account of (a) Oxazine, (b) Indamine, and (c) Acridine dyes.
  2. Write a short account of the chemistry of pyrrole group.
  3. Discuss the constitution of Harmaline or Hygrine.
  4. Give an account of the chemistry of moss acids.
  5. Describe the synthesis of any four of the following :—
    - (a) Norpinic acid.
    - (b)  $\alpha$ -Campholytic acid.
    - (c) Histidine.
    - (d) Guanine.
    - (e) Quercetin.
    - (f) Ellagic acid.
  6. Establish the constitutional formula of Fenchone.
  7. Write an essay on the stereochemistry of carbon compounds, with special reference to the cyclic structure.
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## INORGANIC

## GENERAL PAPER

Examiners— { DR. P. NIYOGI, M.A., PH.D.  
 MR. P. RAY, M.A.  
 DR. P. B. SARKAR, Dr.Es.Sc., A.I.C.  
 MR. H. D. MUKHERJEE, M.Sc.  
 DR. R. C. RAY, M.A., D.Sc.

*Only six questions to be attempted*

*All questions are of equal value*

1. Give a short historical account of the rare gases of the atmosphere and discuss their position in the Periodic Table.

2. How is thiosulfuric acid related to sulfuric acid? Discuss their constitution. How would you convert a thiosulfate into a trithionate, a tetrathionate, and a pentathionate respectively?

3. Give an account of the Basic open-hearth process for the manufacture of steel, drawing a sketch of the furnace with regenerators. Discuss the comparative merits of the Bessemer and open-hearth processes in steel metallurgy.

4. What are catalysts and how do they act? Give a short account of the various technical reactions based on the use of catalysts and discuss their function in each case.

5. Describe the preparation and state the uses of *any four* of the following substances :—

- (a) Sodium hyposulphite.
- (b) Chrome-alum.
- (c) Barium platinocyanide.
- (d) Sodium hypophosphite.
- (e) Ultramarine.
- (f) Perchloric acid.

6. Write short notes on :—

- (a) Atomic number.
- (b) Geometrical and optical isomerism among inorganic compounds.

7. What are double salts? Describe Schreinemaker's 'Method of rest' for determining the composition of various double salts formed in a ternary mixture consisting of two salts and water. How has this method been applied to determine the composition of compounds that are formed only in solution but cannot be isolated in the form of a stable solid phase?

8. Describe the principle underlying the procedure in a gravimetric analysis. The solubilities in water of the compounds of silver and mercurous mercury expressed in grams per litre are given below :—

$\text{AgCl} = 1.54 \times 10^{-5}$	$\text{Hg}_2\text{Cl}_2 = 3.8 \times 10^{-4}$
$\text{AgScN} = 2.5 \times 10^{-3}$	$\text{Hg}_2\text{Br}_2 = 3.9 \times 10^{-4}$
$\text{AgBr} = 1.1 \times 10^{-4}$	$\text{Hg}_2\text{I}_2 = 2 \times 10^{-7}$
$\text{AgI} = 3.5 \times 10^{-8}$	

Why are mercurous mercury and silver estimated in the form of chlorides though they are more soluble?

Give full details of the respective processes.

## INORGANIC—SPECIAL

## FIRST PAPER

*Only FIVE questions to be attempted*

*All questions are of equal value*

1. Write a short essay on the periodic system of elements, with special reference to its relationship with the modern conception of atomic structure and indicating clearly the position of the various groups of transitional elements in the system.

2. What are halogeno-acids and halogeno salts? Compare their physical and chemical properties with those of cyanogeno acids and oxygeno acids and their salts.

3. Give a short account of the isomerism observed among the tetra-coordinated complex compounds of the elements B, N, Be, P, Sn, Cu, Zn and hexa-co-ordinated complexes of As and Al. How would you account for such isomerism?

4. Write short notes on :—

(a) Oxidation-reduction potential.

(b) Atomic disintegration.

(c) Use of titanium salts as an analytical reagent.

5. State the law of radioactive displacement. What led to the development of this law? How can the law be explained in terms of modern atomic structure?

6. Give a general account of the amides of inorganic acids, with special reference to those of sulfuric and nitric acids.

7. Discuss critically the principle of Indirect method of gravimetric analysis, with special reference to binary and ternary mixtures. Describe the uses of the following analytical reagents :—

(a) Dicyanodiamidine.

(b) Ammonium salt of nitrosophenylhydroxylamine.

(c) 8-oxyquinoline.

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SECOND PAPER

*Only FIVE questions to be attempted*

*All questions are of equal value*

1. Discuss the reaction between sulphur dioxide and oxygen, with special reference to the influence of temperature, pressure, the nature and function of the catalyst, and the rate of flow of the gaseous mixture over the catalyst; and hence deduce conditions for the technical success in the manufacture of sulphuric acid by the contact process.

2. Name the polyhalides of the alkali metals that have been prepared. State how their existence has been proved by (a) chemical and (b) physical methods, and discuss their constitution.

3. How do molybdenum and uranium occur in nature? Describe the preparation of the more important compounds of one of the metals, and state their uses (a) in industry, and (b) in the laboratory.



4. What are the important ores of copper and how are they formed in nature? How is crude copper electrically refined? Discuss fully the ionic reactions occurring at the electrodes, and state the optimum conditions for a successful process. How are the anodic slimes treated?

5. Describe the different processes of the extraction of gold from its ores, and give an account of the various methods employed for its refining. How is colloidal gold prepared?

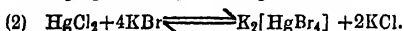
6. What are the sources of Europium and Ytterbium? Describe their isolation in the pure state. Give a short account of the recent researches done on these elements.

Suggest a method you would adopt to determine the constituents in a binary mixture like  $\text{Eu}_2\text{O}_3$  and  $\text{Sm}_2\text{O}_3$ .

7. Describe the spectrographic method employed for the determination of the composition and instability constant of the imperfect complexes that are formed in aqueous solution and are in mobile equilibrium with their constituents.

Discuss the limit of applicability and precision of the method.

How has the above method been applied to discriminate between the two possible courses of the reaction like the following?—



## PHYSICAL CHEMISTRY

### GENERAL PAPER

Examiners— $\left\{ \begin{array}{l} \text{MR. A. MAITRA, M.A.} \\ \text{,, N. G. CHAKRABARTI, M.Sc.} \\ \text{,, K. K. KUMAR, M.Sc.} \\ \text{DR. J. C. GHOSH, D.Sc.} \end{array} \right.$

*Not more than six questions are to be attempted*

*The questions are of equal value*

*Logarithmic tables will be supplied*

1. 'The commonest method of determining the nature of a solid is by a study of its cooling curve.' Discuss the above statement with illustrations.

Or,

'The atoms of all elements have an equal capacity for heat.' Outline the researches which led to this generalization and criticise it in the light of modern investigations.

2. State what you know about the electrical properties of colloids. Discuss coagulation and absorption with reference to the above.

3. Give a clear and concise account of Rutherford and Soddy's disintegration theory of radioactivity.

4. Give an account of the modern conception of the structure of atom, and discuss the experimental evidence on which the conception is based.

5. Write an essay on the influence of light on chemical reactions, with especial reference to the photo-halides.

6. Give as many reasons as you can in support of the view that the ions in aqueous solutions are hydrated.

Or,

Give, with full experimental details, *two* methods of determining accurately the hydrogen ion concentration of a solution, and explain the important applications of this value in analytical chemistry.

7. What are the main characteristics of catalysis? Give an account of the various theories which have been suggested to explain the phenomena.

8. Explain clearly what is meant by the term 'solubility product,' and discuss the utility and importance of this concept in analytical chemistry. Show that

$$s = -\frac{cx_1}{2x} + \sqrt{\frac{c^2x_1^2}{4x^2} + s_0^2x_0^2}$$

where  $s_0$  and  $s$  are the solubilities, and  $x_0$ ,  $x$  the degrees of dissociation, of a uni-univalent electrolyte before and after the addition of a second electrolyte with a common ion. The concentration of this electrolyte in the mixture is  $c$ , and its degree of dissociation  $x_1$ .

9. Derive the Clausius-Clapeyron equation and illustrate its applications to physico-chemical problems.

Or,

Deduce the phase rule from theoretical considerations, explaining fully the terms you would use. Discuss from the point of view of the above rule the equilibrium in *two* of the following systems :—

- (a) Chlorine and water;
- (b) Ferric chloride and water;
- (c) Calcium chloride and water.

10. Describe the experimental methods used for determining the order of a reaction, and show how you would proceed to determine its temperature co-efficient.

What information regarding the mechanism of a chemical reaction can be obtained from the determination of its temperature co-efficient?

The substance X decomposes slowly when dissolved in water. A solution was found to have the following normalities at the times stated after making up :—

t (min)	0	10	50	100	150
N	1.0000	0.9616	0.8235	0.6776	0.5572

Find the order of the reaction and the time at which the decomposition would have amounted to 50 per cent.

11. Describe, in detail, how you would proceed to determine the degree of dissociation of a weak acid from the measurements of conductivity.

Briefly mention alternative methods which can be used for this purpose.

What volumes and concentrations must be mixed in order to prepare 1 litre of mixed acetic and butyric acids  $K = 1.9 \times 10^{-5}$  and  $1.48 \times 10^{-5}$  at  $25^\circ\text{C}$ ., respectively) containing 0.7 mol of each acid, without altering the degrees of dissociation of the separate acids?

## PHYSICAL—SPECIAL

## FIRST PAPER

*Not more than FIVE questions are to be attempted*

*The questions are of equal value*

*Logarithmic tables will be supplied*

1. Write an essay on oxidation-reduction potential in reversible systems.

*Or,*

Discuss the principles underlying potentiometric titrations. Illustrate your answer with several typical examples.

2. Write an essay on the relation between chemical constitution and (a) ionisation, (b) dipole moment.

3. Give an account of the important features of the chemical reaction between hydrogen and bromine (a) in darkness, and (b) in light.

4. Describe a method for determining specific heats at low temperature. Discuss the theories that have been proposed to explain the experimental results quantitatively.

5. Give a critical résumé of the recent theories of heterogeneous catalysis.

6. Describe with theory an accurate method of determining the mobility of gaseous ions.

7. Explain clearly what is meant by the activity coefficient of an electrolyte. What are the different methods for the determination of the activity coefficient? Describe one method in detail, explaining the assumptions underlying the method.

8. Deduce expressions for thermal conductivity and viscosity of gases from the kinetic theory. Describe, in detail, how the viscosity of a gas can be determined experimentally.

*Or,*

Show that the thermal decomposition of  $\text{N}_2\text{O}_5$  ( $2\text{N}_2\text{O}_5 \rightarrow 2\text{N}_2\text{O}_4 + \text{O}_2$ )  $\rightleftharpoons 4\text{NO}_2 + \text{O}_2$  at  $55^\circ$  is a unimolecular gas reaction from the following observed total pressures (m.m.) :—

$p_t$ . . . . .	424.5	449.0	471.5	491.8	524.8	604.0	654.5	678.7
$t$ (min) . . .	3	4	5	6	8	16	30	$\infty$

For the dissociation  $2\text{NO}_2 \rightleftharpoons \text{N}_2\text{O}_4$ ,

$$\log k' = \log p_{\text{N}_2\text{O}_4} / p_{\text{NO}_2}^2 = 2866 / T - \log T - 9.132.$$

## SECOND PAPER

*The questions are of equal value*

*Not more than FIVE questions are to be attempted*

1. Discuss critically the physico-chemical methods that have been proposed in recent years for measuring the area of solid surfaces.
2. Write an essay on chain reactions, with special reference to the work that has been done in the last decade.

*Or,*

Write an essay on the rôle of moisture as a catalyst in chemical reactions.

3. Describe the methods for determining the absolute value of electromotive force between a metal and a solution containing its ions.
4. Explain, with an illustration, how the Nernst Heat Theorem can be applied for calculating the E.M.F. of a galvanic element from purely thermal data.
5. Give an account of the Bohr-Sommerfeld theory of the hydrogen spectrum.
6. Describe Aston's mass-spectrograph, and show how an accurate determination of atomic masses can be made with the instrument. How are the results of such a determination significant? What is meant by the 'packing effect'?
7. Write an essay on *either* (i) Chemiluminescence *or* (ii) Fluorescence.
8. Deduce from thermodynamical considerations the Gibbs adsorption equation—

$$\Gamma = - \frac{c}{RT} \cdot \frac{d\gamma}{dc},$$

where  $\Gamma$  is the amt. of material absorbed per sq. cm. of the surface,  $c$ =concentration,  $\gamma$ = surface tension.  $T$ =absolute temperature, and  $R$ =gas constant. Discuss any modifications that have been introduced in the equation, and show how it has been verified experimentally.

*Or,*

Give a critical account of the theories of stability of colloidal solutions, with special reference to the part played by the electric charge in phenomena of coagulation and peptisation.

## APPLIED CHEMISTRY

## FIRST PAPER

## FIRST HALF

<i>Examiners</i> —	{	PROF. H. K. SEN, M.A., D.Sc., D.I.C.
		DR. PANCHANAN NIYOGI, M.A., Ph.D.
		MR. PRIYADARANJAN RAY, M.A.
		DR. P. B. SARKAR, Dr.Es.Sc., A.I.C.
		MR. HARIDAS MUKHERJEE, M.Sc.
		„ R. L. DE, M.Sc.

*The questions are of equal value*

*Answer ANY THREE questions*

1. Give a general description of the industries based upon the use of sodium chloride as starting material, and mention the uses to which the products thus obtained are put in the arts and industries. Describe, with all necessary details, the manufacture of one of those substances.

2. Describe the preparation of steel in the electric furnace, stating carefully how the various impurities are removed during the process of manufacture. Of what special advantage is this process in bringing about the complete desulphurisation of the metal? What is the position of the electrothermal process in steel metallurgy as compared with Bessemer and open-hearth processes?

3. Describe the preparation of the following substances and state their uses :—

(a) Ultramarine blue; (b) Sodium cyanide; (c) Nitroline; (d) Chrome alum.

4. What is monazite sand and where does it occur? Describe the process of extracting pure thorium from the sand. What other important by-product is obtained in the process, and how is it utilized?

5. Name the important sources of ammonia, and describe the method by which it can be converted into nitric acid.

## SECOND HALF

<i>Examiners</i> —	{	PROF. H. K. SEN, M.A., D.Sc., D.I.C.
		DR. M. N. GOSWAMI, M.A., Dr.Es.Sc.
		„ A. C. SARKAR, M.A., Ph.D.
		PROF. P. C. MITTER, M.A., Ph.D.
		MR. B. C. RAY, M.Sc.
		DR. N. N. GODBOLE, M.A., B.Sc., Ph.D.

*Answer ANY THREE of the following*

1. Write notes on :—

(a) Writing ink, its preparation, quality, and standardisation.

(b) Oil substitutes preparation and their use in vulcanisation.

(c) Compounds of calcium oxide with sucrose, action of  $\text{CO}_2$  on them, and their use in sugar refining.

2. Give an account of the various attempts which have been made to utilise water-hyacinth of Bengal in chemical industries.

3. Describe the preparation of dioxydiamido arsenobenzene (salvarsan) and that of ureastibamine of Brahmachari.

4. Write an essay on the various kinds of fuels in India, indicating the respective advantages and disadvantages attending their uses in industries, average cost of production, and comparative utility in raising steam, heating furnaces, and driving engines.

5. How do you prepare the following substances on a large scale?—

- (a) Amyl alcohol.
- (b) Oleic acid.
- (c) Ether sulphuric.
- (d) Indol.

## SECOND PAPER

### FIRST HALF

<i>Examiners—</i>	{	PROF. H. K. SEN, M.A., D.Sc., D.I.C.
		MR. N. G. CHAKRABARTI, M.Sc.
		PROF. J. N. MUKHERJEE, D.Sc.
		MR. K. K. KUMAR, M.Sc.
		MR. A. MAITRA, M.A.
		DR. HIRALAL RAY, Dr.Ing. (Charletten).

*The questions are of equal value*

ANY THREE to be answered

1. 'Imperfection of ordinary gases makes their liquefaction comparatively easier.' Explain this statement. How does hydrogen behave on expansion? How has it been possible to liquefy it?

2. Air in a cylinder at a pressure of 50 lbs. per sq. in. absolute and a volume of 300 cu. ft. undergoes a change. The final pressure is 30 lbs. per sq. in. absolute and the final volume is 200 cu. ft. Calculate the increase in internal energy expressed as B.T.U. What assumptions are implicit in your solution?

3. What are the factors that influence the overvoltage phenomenon in electrolysis? Describe two cases of the industrial utilization of this phenomenon.

4. Explain the characteristics of a catalytic reaction from the physico-chemical standpoint. Has it been possible to cut down the cost of production by the application of catalysis in industries? If so, how so; if not, why not?

5. Take the cases of any two industrial products which are of colloidal nature or are to be removed from colloidal by-products in their manufacture, and describe the special steps that are to be taken during their preparation because of these colloidal peculiarities.

## SECOND HALF

ONE ONLY *from each group to be answered*

## GROUP I

Examiners— { PROF. H. K. SEN, M.A., D.Sc., D.I.C.  
DR. H. L. RAY, Dr.Ing.  
MR. N. G. CHAKRABARTI, M.Sc.

1. The acetic-acid content of an aqueous solution is to be determined and the following three methods are suggested :—

- (a) Titration with NaOH solution of known concentration.
- (b) Determination of  $P_H$  value of the solution.
- (c) Conductometric titration.

How would you find out the true value from the results thus obtained? Assume that the solution contains no other electrolyte but acetic acid.

2. How is viscosity and surface tension measured usually in technical operations?

3. Describe a polarimeter and discuss its use in an analytical laboratory.

## GROUP II

Examiners— { MR. N. N. SEN, M.Sc.  
DR. P. B. SARKAR, Dr.Es.Sc., A.I.C.

1. Draw up a scheme for estimating (1) Tungsten, (2) Chromium, (3) Vanadium, and (4) Manganese, in 'high speed' steel.

2. What are the chief sources of error in gravimetric and volumetric analysis? Illustrate your answer with reference to methods available for the determination of copper.

3. Give an account of the method you would use for analysing a gas containing nitrogen, oxygen, chlorine, hydrochloric acid, and carbon dioxide.

## GROUP III

Examiners— { DR. M. N. GOSWAMI, M.A., Dr.Es.Sc.  
MR. B. M. DAS, M.A., M.Sc.

1. How would you estimate tannin and caffeine in tea?

2. What chemical controls are practised in a paper factory?

3. How is pentose estimated in a sample of sawdust? Give practical details where necessary.

## THIRD PAPER

Examiners— { PROF. H. K. SEN, M.A., D.Sc., D.I.C.  
MR. B. C. RAY, M.A.  
DR. H. L. RAY, Dr.Ing.

*The questions are of equal value*

## FIRST HALF

*Only THREE questions are to be answered*

1. The wall of a cylindrical furnace, having 12" internal diameter, is constructed of a 4.5 inch layer of refractory brick having a thermal conductivity of 0.08. This is lagged with a 3 inch layer of asbestos—conductivity 0.12, followed with a 2" layer of magnesia—conductivity 0.04. The temperature of the inner face of the wall is 1,500°F and that of the outer surface 120°F. Calculate—

- (i) the heat loss through the wall in B.T.U. per foot height of the furnace;
- (ii) the temperature of the interface between the refractory brick and the asbestos.

2. Describe, with a neat sketch, the construction of a single-pass tubular Heater. In what way would you modify the construction in order to increase its efficiency? Give your reasons for the same.

3. Give a detailed description and method of working of the apparatus you would employ for preparing 98 per cent. glycerine from soap-lye.

4. Describe, in detail, the process for the manufacture of chlorobenzene. Give a neat sketch of the apparatus employed for the purpose, the materials used in the construction of the same with reasons for the choice of such materials.

5. Classify the various methods of measuring high temperatures, and describe fully, with the help of a neat sketch, any form of optical pyrometer, mentioning clearly the theory on which its working depends.

6. Discuss the comparative costs of production of caustic soda from ammonia soda, and electrolytic caustic soda in the vicinity of Calcutta. Indicate also the directions in which economy could be introduced to make the manufacture of caustic soda a paying proposition in competition with imported caustic soda.

## SECOND HALF

*Only THREE questions are to be answered*

1. A steam-boiler is raising steam at such a pressure that the temperature of the boiling water is 350°F. The underside of the boiler is in sight of the fuel-bed, which is at a temperature of 2,500°F (measured by an optical pyrometer). Under these conditions 80 per cent. of the heat absorbed by the boiler is by radiation and the other 20 per cent. is by conduction and convection. If the temperature of the fuel-bed is increased by 200°F, what percentage increase in the capacity of the boiler can be expected, assuming that the heat transferred into the boiler by conduction and convection in a given length of time is the same in both cases? The relative blackness of the boiler may be taken as 0.9.



2. What data would you require to calculate the size of—

- (a) Chimney,  
(b) Grate-area,

and (c) Free combustion space for fuel of a furnace fired with solid fuels on grate?

3. It is desired to concentrate a solution of organic colloids from 10 to 50 per cent. solids in a single-effect evaporator. Steam is available at 15 lbs. per square inch gage (249°F) and a vacuum of 26 inches mercury referred to a 30 inches barometer is to be maintained in the vapour space. This pressure corresponds to 125°F. The feed to the evaporator is 55,000 lbs. per hour. The overall heat-transfer coefficient can be taken as 500 B.T.U. per square feet per °F. per hour. The condensate leaves the evaporator at 175°F and the solution has a negligible elevation in boiling point.

Calculate the square feet of heating surface needed and steam consumption if the temperature of the feed is 125°F.

The specific heat of the feed solution is 0.90 and the latent heat of evaporation can be taken equal to that of water.

Latent heat of steam is 946 B.T.U. per lb. at 249°F.

“ “ “ “ 1,021 “ “ “ “ 125°F.

4. Describe an Otto-four-cycle engine, and arrive at an expression for the efficiency of a Diesel engine.

5. Write an essay on the various methods of industrial refrigeration.

6. What do you know about the modern utilisation of coal? Indicate the possibilities of developing a scientific coal distillation industry in India.

#### FOURTH PAPER

(Fermentation)

Examiners— { PROF. H. K. SEN, M.A., D.Sc., D.I.C.  
MR. P. B. SEN, M.Sc.  
DR. S. R. DASGUPTA, Dr.Ing.  
DR. GILBERT J. FOWLER.

*The questions are of equal value*

#### FIRST HALF

*Only THREE questions are to be attempted*

1. Discuss *any two* of the following biochemical processes, comparing the course of change (a) in presence of oxygen, (b) in absence of oxygen :—

- (i) The alcoholic fermentation of cane-sugar.  
(ii) The breaking down of cellulose.  
(iii) The decomposition of protein.

2. Make careful drawings of the following micro-organisms :—

- (a) A motile bacillus.  
(b) A yeast.  
(c) A mould.  
(d) A protozoan.

Give in each case, if possible, the specific name of the micro-organism chosen.

3. Describe carefully how you would prepare a pure culture of any two of the organisms in Question 2.

4. Give an account of the rôle of *oxidases* in nature. Describe any one technical application of oxidase activity.

5. Write short descriptive notes on the following terms :—

Colloid, catalysis, osmotic pressure,  $P_H$  value, absorption.

### SECOND HALF

*Only THREE questions are to be attempted*

1. Describe the morphological changes of acetic acid bacteria, and shew how these changes affect the process of manufacture and the general precautions adopted to ensure smooth running of a plant.

2. Describe the process of 'malting' and its uses in industries. How is the diastatic power of malt determined?

3. Give an account of the influence of phosphates in the mechanism of alcoholic fermentation by yeast.

4. What is the position of the theory of alcoholic fermentation from sugar?

5. Compare the relative industrial possibilities of power spirit manufacture from saw dust, starch, and calcium carbide, in India.

### FOURTH PAPER

#### (OIL TECHNOLOGY)

Examiners— $\left\{ \begin{array}{l} \text{DR. M. N. GOSWAMI, M.A., Dr.Es.Sc.} \\ \text{DR. N. N. GODBOLE, M.A., B.Sc., Ph.D.} \\ \text{,, R. L. DATTA.} \end{array} \right.$

*The questions are of equal value*

*Try ANY FIVE of the following*

1. How is fish oil generally rendered? What are its usual constituents, and how would you estimate them?

2. Write notes on :—

(a) Oil splitting by hydrolyses.

(b) Rosin, its composition, use, and estimation.

3. How are the following glycerides prepared?—

(a)  $\alpha\alpha$ -distearo- $\beta$  olein.

(b)  $\alpha\beta$ -dipalmito- $\alpha$  stearin.

(c)  $\alpha$ -mono laurin.

(d)  $\beta$ -mono butylin.

4. What processes are employed in the refining of—

(a) Kerosine,

(b) H. O and P,

(c) Paraffin?

5. Write notes on :—

(a) Industrial utilisation of petroleum products.

(b) Cracking.

6. Can you choose *any* oil for the preparation of good soap? If not, state your reasons. How do iodine and saponification values help to determine oil stock for soap-making?

7. How would you prepare the following synthetic perfumes?—

(a) Ionone, (b) Nonylaldehyde, (c) Musk Xylene, (d) Benzyl benzoate,

(e) Phenyl ethyl alcohol.

#### FOURTH PAPER

##### (SILICATES)

Examiners—{ PROF. H. K. SEN, M.A., D.Sc., D.I.C.  
MR. M. K. SEN, M.Sc.

*The questions are of equal value*

*Answer ANY FIVE of the following*

1. What are recuperators and regenerators? Explain, with the help of a neat pencil sketch, how they are used as adjuncts of a glass factory.

2. How would you analyse a specimen of pyrex glass? To what is the property of pyrex glass due?

3. Write an essay on the velocity of gas and products of combustion in the various parts of a glass furnace. Suggest the relative cross-sections of gas and air ports when the temperature of the furnace is 2,200°F and the hearth area 70 sq. ft.

How much air would be necessary to burn one pound of crude oil ( $C_7H_{16}$ )?

4. Describe clearly the various stages in the manufacture of enamelled wares. What is the distinction between enamel, glass, and porcelain? How would you identify whether a specimen is glass, enamel, or porcelain?

5. What are the properties that an ideal refractory should possess in a glass furnace? How is fire brick manufactured? Give details wherever necessary.

6. Write an essay on the prospect of a plate glass industry in India. How is plate glass manufactured?

7. Give an account of the more important chemical facts that have led to the founding of resistant glasses. How is the alkalinity of glasses in contact with water determined?

## BOTANY

## FIRST PAPER

*The questions are of equal value*

*Illustrate your answers by suitable sketches wherever necessary*

## FIRST HALF

*Examiner*—MR. KALIPADA BISWAS, M.Sc.

*Answer ANY THREE questions*

1. Write an essay on the family of *Rivulariaceae*. Discuss the systematic position of the genera belonging to the family, with especial reference to their distinguishing characters. Illustrate your answer with sketches of Indian species as far as possible.
2. Give a brief account of the group of algæ characterised by 'cap-cells,' including the monotypic species of the genus growing on moist soil. Add short notes on the systematic position of the three genera of the family, tracing their relationship with other groups of green algæ in the scale of evolution.
3. What do you know of the life-history of the Indian *Caulerpas*? Discuss the present state of our knowledge of the Indian species of this genus. Review the work done on Indian material of this genus up to the present date.
4. Survey the work done on Indian *Mosses* up to the present time. Note some of the standard literature required for Bryological work. Add note on the habit, collection, and preservation of *Mosses*.
5. Write an account of the life-history of the Indian species of the genus *Notothylas*, explaining its family characters. Discuss its relationship with the other genera of the same family, tracing the evolution of the *Anthocerotus*.

## SECOND HALF

*Examiner*—DR. SAHAYRAM BOSE, M.A., M.D

*Answer THREE questions only, of which the THIRD question is compulsory*

1. Enumerate and describe all the various methods of spore-formation found in various groups of Fungi, with an Indian example of each.
  2. What are the comparative advantages of gills, pores, and teeth, commonly present in the fruit bodies of Higher Fungi?
  3. Describe, in detail, the organisation of tissues in a fruit-body of a hard fungus (like *Polyporus*). How does it differ from the organisation of tissues in a seed-plant? What is the recent work on the point?
  4. What are the current theories about the sex in heterothallic fungi? Which of them seems to you more reasonable?
  5. What are the means usually employed for the eradication of wheat-rust from a given area?
-

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. GIRIJAPRASANNA MAJUMDAR, M.Sc.

1. What do you understand by Apogamy and Apospory? How do they affect the Antithetic Theory of alternation of generations? Can you suggest any explanation for the appearance of Apogamy in the life-history of a Fern?

*Or,*

Give a short account of the life-history of a Psilotum, and discuss the systematic position of the family to which it belongs.

2. Give an outline of the classification of the Leptosporangiate Ferns. Give the distinguishing characters of each group, and indicate their affinities with each other.

*Or,*

Discuss the systematic position of the Marattiaceæ. Give the diagnostic characters of the genera extant.

3. Give a general account of the extinct genera of the Equisetales which are found in India, with special reference to morphology and distribution in time and space. Enumerate the species of Equisetum that are found in Bengal at the present day.

*Or,*

Write an essay on the occurrence of Pteridophytic flora in the Gondwana beds of India. Give their distribution in time and space.

## SECOND HALF

*Examiner*—DR. B. SAHNI, D.Sc.

1. Compare the stem anatomy of the Cordaitales with that of the Cycadofilicales. What conclusion do you draw from such a comparison?

2. Describe the reproductive organs of the Gnetales, and briefly discuss the affinities of the group.

3. Give a comparative account of the leaf in either the Coniferales or the Cycadales. Refer to any features of ecological interest.

4. Draw a series of detailed and fully labelled sketches to show the morphology and anatomy of the reproductive organs of *Ginkgo*.

Give an account of the geological history and distribution of the Ginkgoales.

5. Describe the male gametophyte of the conifers, and discuss the phylogenetic value of this organ.

6. How would you recognize the following genera from their female reproductive organs alone?—

*Podocarpus.**Araucaria.**Taxus.**Lyginodendron.*

## THIRD PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. S. C. BANERJEE, M.A., B.Sc., F.L.S.*Full Marks*—50

1. Give a general account of the morphological adaptations found in a tropical rain-forest.

2. Describe the adaptive features of Lithophytes, and mention the plant that can settle first on lava.

*Or,*

What is Siphonogamy? Discuss its bearing on the *Ranks* of *Plants*.

3. Discuss the morphology of the *spathe* of the inflorescence of *Musa sapientum* Linn.

*Or,*

Establish the *foliar* nature of *Carpels*.

## SECOND HALF

*Examiner*—PROF. S. P. AGHARKAR, M.A., PH.D., F.L.S.*Attempt only THREE questions from this half**Illustrate your answers by neat sketches wherever necessary*

1. Write a short essay on the trend of modern systematic Botany, with special reference to the position of the Gamopetalæ and the views held regarding the proposed abandonment of this group.

2. Enumerate the Families included in the Scitamineæ, and give a general account of the range of floral structure exhibited by them. Mention the characters on which the main sub-divisions of the Families are based, and point out the evolutionary tendencies noticed therein.

3. Give a general account of the Euphorbiaceæ and discuss its affinities. Mention the principal subdivisions of the Family, and give the geographical distribution of the economic and medicinal plants belonging to it.

4. Characterise the Umbellifloræ as defined by Engler and enumerate the Families included in it. What features in the organisation of their flowers justify the view that they are the most highly evolved among the Archi-chlamydæ?

5. Write short notes on Endemism, Plant-succession, and Climax association.

*Or,*

Give a general account of the types of vegetation met with in any of the plant-geographical divisions of India you may be familiar with.

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. P. K. PARIYA, M.A., I.E.S.*Answer ANY TWO questions*

1. Discuss Van't Hoff's rule as applied to biological processes.
2. Write an essay on pigments found in plants.
3. Give an account of the conditions which influence the absorption of water and salts.
4. Discuss the effect of  $\text{CO}_2$  concentration on photosynthesis.

## SECOND HALF

*Examiner*—PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.*Answer only two questions*

1. Describe the character and mode of formation of water-storing tissues that enable land plants to withstand dryness of air and soil.
2. Discuss the comparative importance of chemical and physical characters of soil.
3. Describe the characteristics of tropical rain-forests.

## FIFTH PAPER

*The questions are of equal value**Illustrate your answers by neat sketches wherever necessary*

## FIRST HALF

*Examiner*—PROF. S. P. AGHARKAR, M.A., PH.D., F.L.S.

1. Write a short essay *either* on the 'Concept of species' or 'Adaptation to environment.'
2. Write short notes on *any four* of the following : Genotype, Elementary species, Struggle for existence, Mutations, Linkage.
3. Give a short account of botanical investigations in India from 1800-1900 A.D.

## SECOND HALF

*Examiner*—MR. ILABANTA BANERJEE, M.Sc.

1. Write a short essay on the oil seeds crops of India, refer them to their families, mention the parts of India where they are grown, and describe the methods of extraction of the oil.

2. Give a general account of the chromosome theory of heredity.

Or,

Write short notes on : (i) Linkage, (ii) Phenotypes, (iii) Telosynapsis, and (iv) Sex-chromosomes.

3. Write a short essay on pure line selection in plants, and point out the economic significance of natural cross-fertilisation in relation to pure line selection.

Or,

Give an outline of the work you will undertake in order to breed a disease-resistant type of cotton or wheat.

## PHYSIOLOGY

### FIRST PAPER

Examiners—	{	MR. PARIMALBIKAS SEN, M.Sc.
		RAI DR. U. N. BRAHMACHARI, BAHADUR, M.A., M.D., Ph.D.
		MR. NIBARANCHANDRA BHATTACHARYYA, M.A., B.Sc.

*The questions are of equal value*

*Not more than FOUR questions to be attempted*

1. Give an account of the physiological action of the following chemical substances produced in the body :—

- (a) Acetyl choline derivatives,
- (b) Histamine,
- (c) Adrenaline,

or,

Thyroxine.

- 2. Give an account of the origin, chemical nature, and physiological action of Vitamin D.
- 3. Discuss various theories about the constitution of the cell membrane.
- 4. Write a detailed account of the Reticulo-endothelial system.
- 5. Discuss what you know about respiration beyond the lungs and the physico-chemical changes in blood that take place during the respiratory cycle.



## SECOND PAPER

Examiners— { MR. SAURINDRAMOHAN BANERJEE, M.B., M.Sc.  
 SIR NILRATAN SIRCAR, Kt., M.A., M.D., LL.D.,  
 D.C.L.  
 DR. BIJALIBIHARI SARKAR, D.Sc., F.R.S.E.

*The questions are of equal value*

*THREE questions are to be attempted*

1. Describe the different fibres composing the so-called 'motor nerve' supplying a voluntary muscle, and discuss their respective functions.

What are the various nerve impulses which modify the activity of the pure motor fibres in muscles?

2. Discuss decerebrate rigidity in man and lower animals. What is the latest explanation of the phenomena?

3. Give a detailed account of the non-carbohydrate metabolism occurring in a voluntary muscle during activity.

4. Discuss the mechanical aspect of muscular contraction, laying stress on—

(a) its difference from a stretched elastic body;

(b) the relation between the theoretical maximum work and realisable work;

and (c) the Fenn effect.

5. Discuss the general arrangement of the receptor, connector, and excitor neurons, of the Autonomic Nervous System, with the help of a

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 THIRD PAPER

Examiners— { PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
 MR. NARENDARAMOHAN BOSE, M.Sc.

*The questions are of equal value*

*Answer only FIVE questions*

1. Describe and discuss the physico-physiological apparatus of the sense of hearing, and explain thoroughly the course of transmission of sound-waves from air to the auditory nerve. Discuss how the tympanic membrane acts synkinetically.

2. Write notes on :—

(a) Law of coefficients.

(b) Recurrent vision.

(c) Simultaneous visual induction.

(d) Fehlpunkt.

3. Discuss the reflex optic centres in the mid-brain. With what other sensory systems are visual impressions brought into relationship in these centres? What is the chief efferent pathway from these centres?

4. Give a short account of the development of the retina.

5. Discuss the doctrine of specific nerve energy, with special reference to cutaneous sensations.

6. Compare the optical apparatus of the eye of a land animal with that of an aquatic animal, and explain the respective mechanism of accommodation.

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#### FOURTH PAPER

*Examiners*—{ Mr. SATYENDRAPRASAD NIYOGI, M.B.  
 ,, NIBARANCHANDRA BHATTACHARYA, M.A.,  
 B.Sc.

*The questions are of equal value*

*Answer FOUR questions only*

1. Write an essay on 'The Metabolism of Calcium.'
  2. Discuss the influence of sex on metabolic processes generally.
  3. Give an account of the processes mediating oxidation in the tissues.
  4. Discuss the recent experimental investigations on the chemical nature, colour reactions, and quantitative estimation of Vitamin A.
  5. Give an account of the metabolism of iron in the animal body.
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#### GEOLOGY

##### FIRST PAPER

*Examiners*—{ Mr. KIRANKUMAR SENGUPTA, M.A., B.Sc.,  
 F.G.S.  
 Dr. M. S. KRISHNAN, M.A., A.R.C.S., PH.D.

*Answer ANY TWO questions out of the first three; Questions 7 and 8 are compulsory, No. 7 being equivalent in value to two questions*

*Answer only ONE question out of Nos. 4, 5, and 6*

*All questions other than No. 7 are of equal value*

1. Examine critically the various methods proposed for estimating the age of the Earth. Indicate the order of discrepancy in the results arrived at by these different methods.

2. Indicate the epochs of igneous activity in India. Describe briefly the rocks belonging to these epochs and any accompanying changes in the physical geography of India.

3. Write briefly what you know about magmatic segregation and ore-deposition. Illustrate your answer with some Indian examples.

4. Explain all the favourable geological conditions for oil accumulation, with examples. Write, in detail, how you would proceed to report on an oil-field, indicating the points you would embody in your report. What conditions govern the selection of the best sites for drilling operations?

5. Describe the occurrences of chromite in India with notes on their rock and mineral associations. How is chromite dressed for the market, and what physical conditions make the dressed ore suitable for particular purposes? On what percentage basis is it sold in the market, and at what price per unit?

6. Describe the geology of the occurrence of tin in Burma. How would you dress an ore containing cassiterite, wolfram, and quartz? What is the recognised minimum percentage of tin which pays to work the different kinds of deposits?

7. Calculate the proportion of limestone and clay for a mix for cement when you have the following analyses of the materials:—

	Clay.	Limestone.
SiO <sub>2</sub> .. .. .	62.2	2.4
Al <sub>2</sub> O <sub>3</sub> ... ..	16.1	2.0
Fe <sub>2</sub> O <sub>3</sub> . . . .	4.2	0.3
CaO ... ..	1.6	50.2
MgO ' ... ..	1.2	1.5
SO <sub>3</sub> ... ..	1.7	0.6
K <sub>2</sub> O, Na <sub>2</sub> O ... ..	0.8	0.4
H <sub>2</sub> O, CO <sub>2</sub> , etc. . . .	12.2	42.6

What quantities of the above materials are required for the manufacture of one million barrels (380 lbs. per barrel) of cement, neglecting other changes than loss of water, CO<sub>2</sub> and other volatile constituents? Taking the quality of limestone (sp. gr. 3.0), clay (sp. gr. 2.0), and the annual rate of production at one million barrels as given above, find out if a horizontal bed of limestone 10 ft. thick over an area of 450 bighas (1 bigha=1,600 sq. yds.) and a bed of clay 5 ft. thick over 400 bighas of land would be sufficient for running a cement factory for a period of 30 years, the loss in raising the materials being taken at 20 per cent.

8. By what characters would you recognise durain, vitrain, and fusain? What are the chief physical and chemical differences between peat, lignite, bituminous coal, and anthracite? Name some localities in India where the above-mentioned types of coal are found.

## SECOND PAPER

Examiners— { MR. SARATLAL BISWAS, M.Sc.  
 PROF. K. K. MATHUR, B.Sc., A.R.C.Sc.,  
 A.R.S.M.

*The questions are of equal value*

*Answer FIVE questions—at least TWO from EACH group*

## GROUP A

1. Classify the minerals of the pyroxene group. Give the chemical composition, characteristic optical properties, and the mode of occurrence of each member of the group.

2. What are the fundamental types of space-lattices? Explain the manner in which these enter into the actual structure of crystals.

3. Write notes on the following : indices of a zone, circular polarisation, hour-glass structure, and inclined dispersion.

4. Describe briefly—

(a) the character of water in minerals;

(b) the origin of the following Indian minerals : mica, kyanite, and bauxite.

### GROUP B

5. Trace the process of crystallization of a homogeneous melt of two components *A* and *B* which have limited miscibility in each other in the solid state.

6. Write notes on the following : luxullianite, auto-metamorphism, grey wacke, intersertal texture, leucitophyre, and anatexis.

Explain the terms amphibolite and hornblendite, and indicate how these rocks arise in nature.

8. Describe the geology of an area where, in your opinion, a number of igneous rock types have originated by a process of magmatic differentiation, and explain the process.

### THIRD PAPER

Examiners— { PROF. HEMCHANDRA DASGUPTA, M.A., F.G.S.  
MR. D. N. WADIA, M.A., B.Sc., F.G.S.,  
F.R.G.S.

*The questions are of equal value*

*Five questions are to be attempted. At least two must be selected from EACH group*

### GROUP A

1. Describe the Archaean rocks as developed in the Central Provinces, and note any important petrological types.

2. Give an account of the Himalayan Trias, and indicate the areas in India where the Triassic rocks of a *continental facies* are developed.

3. Describe the geology of any area with which you are personally acquainted, and illustrate your answer with suitable sketches, sections, etc.

4. Give an account of the Purana rocks as developed in the peninsular part of India, and indicate how you may proceed to correlate them.

### GROUP B

5. Give an outline of the classification of the Trilobites. Describe the ventral and the dorsal aspects of the carapace of a Trilobite. Give an account of the geological distribution of the Arthropoda as obtained from the Indian materials.

6. (a) Write notes on *Pithecanthropus*, *Eoanthropus*, *Sinanthropus*, and *Sivapithecus*.

(b) State all that you know regarding the evolution of the *Proboscidea*.

7. Write short notes on the following and refer each of them to its proper systematic position :—

*Bullinus*, *Bramatherium*, *Dielsma*, *Hesperornis*, *Lecanites*,  
*Lyptosaurus*, *Nilssonia*, *Noeggerathiopsis*, *Palaeoneilo*, and  
*Palaeosimia*.

8. Give a short account of the fauna of the Jurassic beds of Cutch.

#### FOURTH PAPER

##### GROUP A

##### (PALÆOBOTANY)

Examiners—{ PROF. HEMCHANDRA DASGUPTA, M.A., F.G.S.  
DR. BIRBAL SAHANI, D.Sc.

*The questions are of equal value*

*Answer ANY FIVE questions*

1. Describe the anatomy of any fossil seed known to you, and refer the seed, as far as the facts permit, to its systematic position.

2. Write a brief but fully illustrated account of the structure of *Sphenophyllum*. Say what you know of the distribution of this genus, both in space and time.

3. Write a note on Algæ as rock-formers. Refer to any Indian fossil algæ; briefly describe their structure, and indicate their affinities.

4. Say what you know of the distribution and structure of the Indian members of the Cordaitales.

5. Describe recent improvements in the technique of investigating fossil plants.

6. Write brief notes on the following genera, referring to the latest work in each case :—

*Vertebraria*, *Lyginopteris*, *Asteroxylon*, *Williamsonia*.

7. Describe the main features of the flora of the Rajmahal Series of India, and refer to floras in other parts of the world which show a special affinity with the Rajmahal flora.

8. Briefly discuss, on palæobotanical grounds, the question of the age of the late Palæozoic glaciation in the southern hemisphere.

9. What are coal-balls? State all that you know regarding their origin and distribution, and point out their palæobotanical importance.

##### GROUP B

##### (IGNEOUS ROCKS)

Examiners—{ MR. SARATLAL BISWAS, M.Sc.  
DR. A. M. HERON, D.Sc. (EDIN.), F.G.S.,  
F.R.G.S., F.R.S.E.

*The questions are of equal value*

*Answer FIVE questions only*

1. Explain clearly the rôle of volatile constituents of magma in petrogenesis. Give examples.

2. Give an account of the igneous rocks of Kathiawar.
3. What may dark patches in a granite be?
4. Discuss the different views as to the nature and ultimate source of parental magma.
5. Describe the feldspathoids and their part as rock-formers, giving a few important rocks as examples.
6. What do you know of the following : palinogenesis, micaperidotite, kodurite series, and eclogite?
7. Write briefly what you know about the anorthositcs.

## GROUP C

## (COAL)

Examiners—{ Mr. NIRMALNATH CHATTERJEE, M.Sc.  
 ,, D. N. WADIA, M.A., B.Sc., F.G.S.,  
 F.R.G.S.

*The questions are of equal value*

ANY SIX questions out of these may be answered

1. State briefly the basis on which Gruner, Seyler, and Parr established their classification of coal. Discuss the subject in brief, and state which classification you favour. Classify the coal specimens having the following analysis according to the scheme adopted by the Indian Coal Grading Board :—

	I	II	III	IV
Moisture ...	5.9	7.10	0.76	1.00
Volatile matter ...	30.55	31.50	23.25	20.50
Fixed carbon ...	55.66	53.90	62.40	61.40
Ash ...	13.80	14.60	14.35	18.10
Calorific value (in calories) ...	6828	6458	7292	7142

2. What do you understand by *calorific value* of coal, and how is it expressed? State briefly the best method by which the calorific values of samples of coal can be obtained. Give your opinion about the utility and importance of the various formulæ for the determination of calorific value.

3. Explain what you understand by *coal carbonisation*. What are the principal products of *Low Temperature* and *High Temperature* carbonisation? Give your opinion about the importance and utility in India of the two industries. Give a short account of any bye-product recovery oven you have seen.

4. Give a brief account of any coal-field you have visited with a sketch plan and sections of the field. State what position this field occupies with respect to the total annual output of coal in India.

5. What are the different forms in which Sulphur occurs in coal? Mention briefly why the sulphur question is of importance to metallurgists and coal consumers. Can you suggest any practicable means of improving the quality of the Tertiary coals of India with respect to their sulphur content?

6. What is the difference between coal dust explosion and spontaneous combustion of coal? State briefly the different views regarding the causes of spontaneous ignition of coal. What precautions are needed to prevent it? Can you give some examples of underground fire in Indian coal mines?

7. Explain the following terms :—

Coal ball; Welter's Law; Goaf; Jhama; Dopplerite; Pillar and Stall; Alpha cellulose; Fuel ratio.

Give examples of these from Indian occurrences wherever possible.

8. State briefly how coal can be converted into gaseous fuel. What type of coal is most suitable for such industry? What are the prospects for the utilisation of inferior grade coals of India for the manufacture of gaseous fuel?

## ZOOLOGY

### FIRST PAPER

#### FIRST HALF

Examiners—{ DR. EKENDRANATH GHOSH. M.D.  
MR. D. MUKHERJEE, M.Sc.

*The questions are of equal value*

*Not more than THREE questions should be attempted*

1. Discuss the theory of Natural Selection.
2. What are the characteristics of the arboreal animals?
3. Trace the ancestry of Horse.
4. State what you know about the founders of comparative anatomy.
5. Write short notes on any five of the following :—
  - (i) Theory of Recapitulation, (ii) Retrogression, (iii) Plankton, (iv) Lamarck, (v) Archæopteryx, (vi) Sphenodon, (vii) Homology, (viii) Fossil.

#### SECOND HALF

Examiners—{ DR. B. PRASAD, D.Sc.  
,, H. N. RAY, M.Sc., Ph.D.

Write an essay on any one of the following :—

- (i) Inheritance of Acquired Characters.
- (ii) Origin of Vertebrates.
- (iii) Recapitulation Theory.
- (iv) Origin and Composition of Indian Fauna.

## SECOND PAPER

## FIRST HALF

Examiners—{ DR. H. N. RAY, M.Sc., Ph.D.  
 ,, K. N. BAHL, D.Phil., D.Sc.

*The figures in the margin indicate full marks*

*Only two questions to be attempted*

1. Give a brief account of what you know about the cytological basis of sex-determination. 25
2. Write short notes on *any five* of the following :— 25
  - (a) Meiosis, (b) Obligatory parthenogenesis, (c) Linkage, (d) Pædogenesis, (e) Maturation, (f) Syndesis, (g) Golgi bodies, (h) Centrosome.
3. Illustrate, by examples, the manner in which the interaction or co-operation of Mendelian factors appears to be necessary for the production of certain characters in animals. 25
4. Discuss the statement: 'All organisms are the result of the interaction of the factors of inheritance and the conditions of the environment.' 25

## SECOND HALF

Examiners—{ DR. H. K. MUKHERJEE, D.Sc., D.I.C.  
 ,, G. MATHAI, M.A., S.C.C

*The questions are of equal value*

*Only two questions to be attempted*

1. Describe the various modes of yolk sac and allantois-formation amongst mammals.
2. Discuss the origin of the heart in the Vertebrata.
3. Discuss the formation of the kidney in the Vertebrata.
4. Discuss the evidence that may be drawn from Embryology regarding the origin of birds.
5. Describe the development of chondrocranium in any fish that you know of.

## THIRD PAPER

## FIRST HALF

Examiners—{ RAI G. C. CHATTERJEE, BAHADUR, M.B.  
 MR. G. K. CHAKRABARTI, M.Sc.  
 DR. EKENDRANATH GHOSH, M.D.

*The questions are of equal value*

*Attempt ANY THREE of the following*

1. Describe the life-history of *Trypanosoma lewisi*.



2. Describe the canal system of Sponges.
3. Discuss the affinity of Ctenophora.
4. Write notes on Pro-scolex, Cysticercus, Myracidium, Cercaria.
5. Describe the life-history of Trichinella spiralis.
6. Discuss the water vascular system in Echinoderms.

### SECOND HALF

Examiners—{ MR. D. MUKHERJEE, M.Sc.  
DR. B. PRASAD, D.Sc.

*The questions are of equal value*

*Not more than two questions are to be attempted*

1. Write a short account of the various types of larval forms of the Crustacea.
2. Describe the nervous system of *Pila globosa*.
3. Give a detailed account of the nephridial system of *Pheretima*.
4. What are the distinguishing characters of the following : (a) Hymenoptera, (b) Diptera, and (c) Lepidoptera?
5. Write short notes on :—  
(a) Hæmocœl, (b) Peripatus, (c) Hectocotylism, and (d) Pecten.

### FOURTH PAPER

#### FIRST HALF

Examiners—{ DR. H. K. MOOKERJEE, D.Sc., D.I.C.  
., G. MATHAI, M.A., Sc.D.

*The questions are of equal value*

*Only two questions to be attempted*

1. Discuss, in detail, the affinities of Hemichordata.
2. Describe briefly the anatomical peculiarity of a simple Ascidian.
3. Compare the vascular system of Dipnoi with that of a Teleostean fish.
4. Discuss the zoological importance of *Amphioxus*.
5. Discuss the position of Ganoids in the Class Pisces.

#### SECOND HALF

Examiners—{ MR. G. K. CHAKRABARTI, M.Sc.  
DR. K. N. BAHL, D.Phil., D.Sc.

*The questions are of equal value*

*Attempt ANY THREE*

1. (a) What are the skeletal peculiarities of Ophidia?  
(b) How would you distinguish a poisonous snake from a non-poisonous one?

2. (a) Give the anatomical features of *Archæopteryx*.  
(b) What are the salient characters of *Ratitæ* and *Carinatæ*?
3. (a) Give an outline of the classification of *Primates*.  
(b) State fully the distinctive features of *Platyrrhine* and *Catarrhine* monkeys.
4. Write an essay upon the formation and succession of the teeth in the *Mammalia*.
5. How far has the study of fossil forms bridged over the gap between the *Reptilia* and the *Mammalia*?

## EXPERIMENTAL PSYCHOLOGY

### FIRST PAPER

*The questions are of equal value*

#### FIRST HALF

*Examiner*—MR. MANMATHANATH BANERJEE, M.Sc.

*Only THREE questions to be answered*

1. Give a resumé of the work done by Pavlov and his pupils on the objective method of studying the functions of the brain.
2. Form a critical estimate of Lashley's researches on cerebral localisation.
3. What light does the study of the autonomic nervous system and the organs of internal secretion throw on the physiological psychology of affections?
4. Discuss the functions of the different parts of the vestibular apparatus.
5. Describe the changes that occur in the retina during activity. What is recurrent vision?
6. Describe carefully the structures in the internal ear, and examine Helmholtz's theory of hearing.
7. What do you understand by Trichromatic theory of colour vision? Examine how far it can explain abnormalities of colour vision.
8. Explain as fully as you can the rôle played by the principles of adaptation and inhibition in mental life.

#### SECOND HALF

*Examiner*—DR. SUHRITCHANDRA MITRA, M.A., D.PHIL.

*Only THREE questions to be answered*

1. Write a note on the nature of Voluntary action based on the data of reaction-time experiments.

2. 'If at all, it is only in the domain of sensations that the stimulus can be varied in intensity. In experiments on complex mental phenomena, the only possible variations of the stimulus are with respect to *number, quality, or configuration.*' Discuss the truth of the statement and its bearing on the general applicability of the *psychophysical methods.*

3. Write notes on the following :—

- (i) Meaning attitude and Process attitude.
- (ii) Cognitive clearness and Attributive clearness.

4. Discuss *one* of the following :—

- (i) Gestalt theory of perception of movement.
- (ii) Eidetic type and Eidetic imagery.
- (iii) Theory of emotion in the light of the experiments of Cannon and Sherrington.

5. Give a historical account of the development of Structural Psychology.

## SECOND PAPER

*The questions are of equal value*

Only THREE questions are to be answered from EACH half

### FIRST HALF

*Examiner*—MR. HARIPADA MAITI, M.A.

1. Discuss the points of difference between a *normal* and an *obsessional* thought. What is the genesis of obsessional thought?

2. Give a brief account of the history of the development of the *psychoanalytic technique.*

3. What is *hypnosis*? How is it brought about? How do you account for the *phenomena* of *hypnotism*?

4. How would you interpret *dreams*, and how would you demonstrate the correctness of your *interpretation*?

5. Write a brief account of the *ambivalent tendencies* of *sexual life.*

### SECOND HALF

*Examiner*—DR. B. C. GHOSH, M.A., M.B., B.C.

1. Describe manic-depressive insanity. What theories try to explain it?

2. Discuss the mental splitting found in Schizophrenia and in Hysteria.

3. Give an account of types of temperament, noting any physiological explanations offered.

4. Give examples of co-conscious personalities.

Do the dissociated activities in such cases support the theory of fragmentation of the self?

5. Discuss the monadic view of human personality.

## THIRD PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner*—MR. HARIDAS BHATTACHARYYA, M.A.

*Answer ANY THREE of the following questions*

1. Do you think that you can really study the animal *mind*, or are you of necessity limited to the study of animal *behaviours* only? Discuss the question thoroughly by reference to different grades of animal life.
2. What is tropism? How is it distinguished from reflex action? How would you explain the gathering of *Paramecia* in a drop of weak acid?
3. Trace the gradual development of audition from the protozoa to the mammals, and indicate the corresponding changes in the structure of the organs concerned.
4. Discuss the question of the perception of Space in *Arachnida*, with special reference to spiders.
5. Write notes on *any three* of the following :—
  - (a) Lloyd Morgan's Canon.
  - (b) Division of labour in bee-hives.
  - (c) Mendelism.
  - (d) Path-finding by ants.
  - (e) Preference Method.
  - (f) Animal insight.

## SECOND HALF

*Examiner*—MR. MOHANLAL GANGULY, M.Sc.

*Answer ANY THREE of the following questions*

1. What is the difference between an animal association and an animal society? Describe the characteristics of 'open' and 'closed' animal societies. Give examples in each case.
  2. What are the social instincts of animals? Illustrate them and explain how Hobbhouse has attempted to explain their origin.
  3. Give a critical review of the current schools of thought regarding interpretations of animal behaviour.
  4. Critically discuss Thorndike's view that the learning of an animal is an instinct of its neurones.
  5. Discuss how far animals perceive relations, and illustrate your views by appropriate examples.
-

## FOURTH PAPER

*The questions are of equal value*

## FIRST HALF

*Examiner—PRINCIPAL C. H. RICE**Only THREE questions are to be attempted*

1. Enumerate and explain the characteristic differences in attentiveness between the child and the average adult.
2. Give an account of the Gessel Scale of mental development.

*Or,*

Outline a scheme for the systematic study of the mental development of Pre-school children, pointing out the special difficulties you are likely to encounter in such a study.

3. Write a short essay on the main principles of mental development from the Gestalt standpoint.
4. Discuss the peculiarities of children's thinking as revealed in their language habits.
5. Write notes on *any two* of the following :—
  - (a) Adolescent attitude to religion.
  - (b) Children's cruelties.
  - (c) Children's imagination as revealed in their plays and drawings.

## SECOND HALF

*Examiner—MR. GOPESWAR PAL, M.Sc.**Answer THREE questions from this half*

1. Summarize the effects of the 'Psychological Movement' on the schools, referring specifically to the contribution of Pestalozzi, Herbart, and Froebel.

*Or,*

Trace the Scientific Tendency in Education beginning about the opening of the Nineteenth Century.

2. 'It seems evident that original nature includes tendencies that are good, tendencies that can be used for good and tendencies that had best be abolished.'

Expand the above statement, indicating and specifically illustrating certain tendencies which would fall under these heads.

Is there any difference of opinion as to the truth of Thorndike's position as expressed in his statement quoted above?

3. What do you understand by 'Configuration'? Comment upon the statement that 'Kohler has demonstrated the fact that insight into the relations within a configuration is the only means of securing effective general training.'

4. Do the lower animals in learning useful habits or clever tricks illustrate any of the principles of learning which may be employed in teaching school children?

Or,

Design experiments to measure the speed and permanence of (a) Learning an act of skill; and (b) Memorizing a passage of poetry.

5. Have the measures of Individual Differences, when examined statistically, established any particular capacities or disabilities as characteristic of either sex, or of any racial or social group?

Or,

Discuss the functions of examinations; criticise the examination system as now in vogue; explain what is meant by the 'New Type Examination'; and set forth its advantages and disadvantages.

Or,

What are the uses of intelligence tests in schools? Have the results of mental measures brought to light any specific evils requiring correction? What are the special difficulties in introducing a mental testing programme into Indian schools?

## ANTHROPOLOGY

### FIRST PAPER

Examiners—{ MR. ANATHANATH CHATTERJEE, M.B.B.S.  
MR. M. N. BOSE, M.B., C.M.

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

### FIRST HALF

1. Determine the special characters of *Homo* as an anatomical type.
2. What is the relationship of man to the anthropoid apes?
3. Enumerate the diagnostic characters of *Tarsoidea*, and write a brief note on the position and affinities of the Tarsiers.
4. How would you differentiate the skull of a Gorilla from that of a Chimpanzee?
5. Mention the anatomical features which will lead you to identify a femur as human. What peculiarities would you meet with in the femur of a climber?

### SECOND HALF

1. Briefly state the characters peculiar to the Negroids of Grimaldi.
2. Describe the morphological characters of the Heidelberg jaw and briefly comment on its affinities.
3. Give your view on the place of Neanderthal man in the human series.
4. Write a short dissertation on *Sinanthropus*.
5. Write short notes on :—  
(a) The quaternary fauna of Europe.  
(b) The Mugem race.  
(c) *Sivapithecus Indicus*.  
(d) Human figurines from the Reindeer Age of Europe.

## SECOND PAPER

*Examiner*—DR. BIRAJASANKAR GUHA, M.A., PH.D.

*The questions are of equal value*

## FIRST HALF

*Answer ANY TWO questions*

1. Discuss the respective influences of Convergence and Heredity in the differentiation of racial types of Man.
2. What do you know of the 'Prospectors'? To what extent can they be regarded as having introduced Megalithic culture in Europe? Are there evidences of their activities in other parts of the world?
3. What do you think of Ripley's classification of European races into the Mediterranean, Alpine, and Nordic? How far would you modify it in the light of subsequent knowledge?
4. What are the somatic traits of the Armenoid Race? To what extent has it entered in the composition of the people of Western Asia, and how far back historically can you trace it?

## SECOND HALF

*Examiner*—MR. HARANCHANDRA CHAKLADAR, M.A.

*Answer only THREE questions*

1. Write an essay on the Dravidians in India.
2. Analyse the ethnic elements in the people of Polynesia. Discuss their relations with other peoples about them.
3. Discuss the anthropological history of the Slavs.
4. Describe the somatic characters of the Hamites, and discuss their origin and distribution.
5. Attempt a classification of the aboriginal peoples in South America by their somatic characters.

## THIRD PAPER

*Examiners*—{ DR. P. MITRA, M.A., PH.D., F.R.A.I.  
MR. HEMCHANDRA DASGUPTA, M.A., F.G.S.

*The questions are of equal value*

*Only THREE questions from each group are to be attempted, of which No. 8 must be one*

## A

1. Give a history of the Pleistocene glaciations, bringing out the dominant fauna and their relations with successive stages of early human culture.
2. What indications do we get of the religious life and rituals of the Palaeolithic peoples?

3. Describe the weapons of offence and defence that are found amongst purely hunting tribes. How much of these would be possibly known to ancient hunters of Pleistocene times?

4. Discuss the age and authenticity of rostrorhinatus.

5. What is laterite? What light has been thrown on Indian pre-history by the study of laterites?

#### B

6. What are the methods of making pottery? From their distribution data what light can be thrown on their origin?

7. Give a short comparative study of the early potteries of the chalcolithic cultures of Sumer, Susa, and Indus Valley.

8. Give a brief account of the religious beliefs and racial composition of the Indus Valley peoples in the chalcolithic age.

9. What are the main Early Iron Age finds in India? How far do they bear comparison with those of Europe?

10. Discuss either the early types of habitation or the primitive methods of transport by water.

### FOURTH PAPER

#### FIRST HALF

*Examiner*—MR. KSHITISPRASAD CHATTERJEE, M.A.

*The questions are of equal value*

*Only two questions need be attempted*

1. Discuss the value of kinship terms as evidence of extinct forms of social organisation. What corroborative evidence would you require to support inferences drawn from a study of such terms? Illustrate your arguments. 25

2. Describe, briefly, the marriage ceremony of a high caste North Indian Hindu. What significance would you attach to the (a) rites performed by the women, (b) part played by the barber? Give your reasons. 25

3. What is dual organisation? Write a short note on the existence of dual organisation in India, briefly indicating the available evidence on the point. 25

4. Write a short essay on the interdependence of the economic and social position of women in primitive society. 25

#### SECOND HALF

*Examiner*—MR. TARAKCHANDRA DAS, M.A.

*Answer ANY THREE of the following questions*

*The questions are of equal value*

1. Describe briefly the 'sanctions' by which laws are enforced in primitive society.

2. What is the universal pattern in culture? Discuss briefly how traits of culture are acquired.



3. Discuss the relation of art with religion in primitive society as well as in the folk-culture of Bengal.

4. What is a totem and what are its different varieties? Illustrate your answer with Indian examples as far as possible.

5. Write a short essay on the remains of animistic beliefs and practices in modern Hinduism.

#### FIFTH PAPER

Examiners—{ RAO BAHADUR L. K. A. IYER, B.A., L.T.  
 { SIR NILRATAN SIRCAR, Kt., M.A., M.D., LL.D.,  
 D.C.L.

#### (GROUP A)

*The questions are of equal value*

*Answer ANY THREE questions from EACH half*

#### FIRST HALF

1. Discuss the main problems connected with human heredity, illustrating your statements with specific instances.

2. Write a dissertation on Mendel's theory of inheritance.

3. Give a clear account of the phenomenon of variation. Discuss the contributions of Darwin, De Vries, and Weismann in this respect.

4. State what you know about the inheritance of acquired somatic characters.

5. Write an essay on 'Perpetuation and improvement of species as the highest ethical obligation.'

#### SECOND HALF

1. Describe the result of intercrossing two or more types. Illustrate by specific reference to the racial history of some people of India.

2. 'Influence of civilized men upon primitive tribes is always injurious to the latter.' Comment or criticise this statement in the light of the ethnological conditions prevailing in some parts of India.

3. Discuss, with illustrations, the influence of environment on the development of racial character.

4. How far is it possible to prevent the degeneration of a given race by the application of the laws of Eugenics?

5. Write a thesis on the possible results of the conquest of one race by another.

## SIXTH PAPER

Examiners—{MR. TARAKCHANDRA RAYCHAUDHURI, M.A.  
RAI BAHADUR RAMAPRASAD CHANDA, B.A.

*The questions are of equal value*

*Six questions only are to be answered*

1. Give an account of the ethnic types met with in Western Asia.
2. State whether the people who are called *Arya* in the hymns of the Rigveda were ethnically and culturally homogeneous, and discuss the bearing of this question on the origin of caste. What light do the discoveries at Harappa and Mohenjo-daro throw on this question?
3. Briefly narrate the early racial history of Mesopotamia.
4. Distinguish the ethnic elements of the Japanese population.
5. 'Europe is, to a certain extent, regarded as an ethnological dependency of Asia.'  
Discuss.
6. The Rāḍhiya and Vārendra Brāhmans of Bengal are the descendants of the five Brāhmans brought by Adi Śūra. Discuss the scientific value of this tradition.
7. What do you mean by orientation of a skull? Write short notes on the different attempts to orient a skull.
8. Write notes on Coefficient of variation, Coefficient of racial likeness, Facial profile angle, Platymeric index, and Angle of torsion of the femur.
9. Write an essay on the development of the science of Anthropometry, specially dealing with its utility.

## (GROUP B)

## FIFTH PAPER

*Only THREE questions are to be attempted from EACH half*

*The questions are of equal value*

## FIRST HALF

Examiner—RAI BAHADUR SARATCHANDRA RAY, M.A.

1. Show how what Malinowski calls the 'nuclear family complex' differs in different types of families.
2. What is Freud's idea of the origin of Totemism, and what are the fallacies involved in his original premises?
3. What are the psychological elements in the borrowing of culture?
4. What rôle is played by environment in the shaping of culture? Illustrate your answer by concrete examples.
5. State, with examples, the mechanism of the primary and secondary diffusion of cultures.

## SECOND HALF

*Examiner*—DR. P. MITRA, M.A., Ph.D.

1. Show how, according to Radcliffe-Brown, there might have been an original Australian-Dravidian system out of which the classificatory and class-systems of primitive India, Australia, and Melanesia might have diverged and developed.

2. Write a short account of the types of cross-cousin marriage in India, pointing out where they might be due to asymmetry in descent.

3. Can all the different systems of preferential mating and exogamous marriages be traced to some primary incest-taboo? Show how they could have developed from the extension of the ideas in the family-group.

4. Discuss any two of the following : Four-class system, Eight-class system, Six-class system, Gerontocracy, Group-marriage.

## SIXTH PAPER

## FIRST HALF

*Examiner*—MR. J. P. MILLS, M.A., I.C.S.*The figures in the margin indicate full marks**Answer ANY THREE of the following questions*

1. Compare the Ao and Lhota systems of marriage and discuss their respective sociological effects. 16

2. 'Traces of ancient totemism are stronger in the Ao tribe than among the other Naga tribes that have been studied.' Discuss this. 16

3. Describe the Lhota belief in *Raisen* (medicine men). 16

4. Write an essay on the training and duties of an Ao from childhood to death. 16

5. What do you know of (1) Ao drums (zylophones), (2) Head tree (*mingetung*), (3) Sky folk (*Polso*), (4) Ao death ceremonies, (5) Wokha Hill and the beliefs connected with it. 18

## SECOND HALF

*Examiner*—MR. TARAKCHANDRA DAS, M.A.*The questions are of equal value**Answer ANY THREE of the following questions*

1. Describe the Sema system of colonisation, and give some idea of their village organisation.

2. Give a comparative estimate of the eschatological beliefs of the Naga tribes of Assam.

3. Describe the different methods of disposing of the dead body found among the Nagas of Assam.

4. Write an essay on the different methods of cultivation practised among the Angami and Sema Nagas. Show how far they are responsible for the nature and character of ownership in land among these tribes.

5. Write notes on the following :—

(a) Aluzhi.

(b) Genna.

(c) Morung.

# Preliminary Examination in Law, January, 1932

## JURISPRUDENCE

Paper-Setters—{ MR. SITARAM BANERJEE, M.A., B.L.  
DR. S. C. BAGCHI, LL.B., LL.D.

### FIRST HALF

Examiners—{ MR. SITARAM BANERJEE, M.A., B.L.  
,, AZIZ RAHIM, M.A., BARRISTER-AT-LAW.  
,, KAMALABHUSHAN BOSE, M.A., B.L.,  
BARRISTER-AT-LAW.

*The questions are of equal value*

FIVE questions and no more need be attempted from each half

1. 'Jurisprudence is the science of positive law.' Explain and discuss.
2. Law is said to be the command of sovereign authority upon the people. Discuss the nature of the right of the sovereign authority to impose those commands.
3. Define 'right'. Clearly distinguish, giving examples, between 'rights in rem' and 'rights in personam'.
4. What do you understand by 'adverse possession'? Write a short note on possession developing into title.
5. Define 'contract'. Explain, with examples, the elements of a valid contract.
6. Describe the relation between 'Equity' and 'Law'. Can equity override law?
7. Write a short thesis on 'juristic personality'. Is a Hindu idol a juristic personality?

### SECOND HALF

Examiners—{ MR. M. N. MITTER, M.A., B.L., BARRISTER-AT-LAW.  
,, RAMESCHANDRA PAL, M.A., B.L.  
,, SUKUMAR MITRA, M.A., BARRISTER-AT-LAW.

1. 'The Jus Naturale, or Law of Nature, is simply the Jus Gentium or Law of Nations seen in the light of a peculiar theory.' Explain and discuss.
2. In the movement of progressive societies the Individual is steadily substituted for the Family, as the unit of which civil laws take account. Expand the idea.
3. Distinguish between a 'crime' and a 'tort', and trace briefly the gradual development of the modern idea of 'crime'.
4. What do you understand by 'ownership'? Give a short history of the development of the legal concept of 'individual ownership'.
5. Describe and classify the different kinds of obligations known to law.
6. 'International law is the vanishing point of Jurisprudence.' Explain and discuss.
7. How far is 'negligence' a factor of legal liability? Illustrate your answer.

## ROMAN LAW AND PRINCIPLES OF LEGISLATION

*Paper-Setters*— { DR. S. C. CHAUDHURI, M.A., LL.D.  
 ,, SASANKAJIBAN RAY, M.A., D.L.

*The figures in the margin indicate full marks*

*FIVE questions only to be attempted in each half*

## FIRST HALF

*Examiners*— { DR. A. K. CHAUDHURI, B.A., LL.B., LL.D.,  
 BARRISTER-AT-LAW.  
 MR. JAJNESWAR MAJUMDAR, M.A., M.L.  
 ,, KARUNAMAY BOSE, M.A., B.L.

1. What was the legal condition of a slave in Rome ? Explain in your answer how his position changed at different periods. 10
2. What were the essentials of a valid marriage in Rome? 10
3. Write short notes on two of the following :— 10  
 (a) Emphyteusis, (b) Negotiorum gestor, (c) Bonorum Possessio.
4. Discuss the different events which would invalidate a Roman Will. How far could the testator provide against these contingencies? 10
5. Define obligatio. Examine and discuss the different sources of obligation as mentioned in Roman Law. 10
6. Explain and illustrate what were meant by innominate contracts. 10
7. Discuss the rights of riparian owners according to Roman Law. 10

## SECOND HALF

*Examiners*— { DR. S. C. BAGCHI, B.A., LL.B., LL.D.  
 BARRISTER-AT-LAW.  
 MR. S. N. BHATTACHARYYA, B.A.,  
 BARRISTER-AT-LAW.  
 ,, SARATCHANDRA LAHIRI, M.A., B.L.

1. Discuss briefly the scope of Lex Aquilia. How was the original scope subsequently amended? 10
2. What, according to the Lex Aquilia, is the measure of damages in the following cases?— 10  
 (a) X wrongfully kills Y's horse.  
 (b) B wrongfully injures C's slave.
3. A pruner throws down a branch of a tree on a place open to the public. He does not call out before letting the branch drop. It falls on a man who is killed. Is the pruner liable, and if so, on what principle? 10
4. 'Want of skill is reckoned as negligence.' Explain and illustrate. 10
5. What is Equity? Compare Roman and English Equity. 10
6. Trace briefly the development of the idea of territorial sovereignty. 10
7. 'There are nevertheless some important differences between the ancient and modern idea of succession.' Discuss. 10

## HINDU LAW

*Paper-Setters*— { THE HON'BLE MR. JUSTICE DWARKANATH  
MITTER, M.A., D.L.  
MR. C. C. BISWAS, C.I.E., M.A., B.L., M.L.A.

*Answers to be concise and to the point, and must be in the candidate's own words*

*All questions carry equal marks*

## FIRST HALF

*Examiners*— { DR. SASANKAJIBAN RAY, M.A., D.L.  
MR. TARAKESWARNATH MITRA, M.A., B.L.  
,, HIRENDRNATH GANGULI, M.A., B.L.

1. What is meant by saying that Hindu law is the personal law of the Hindus?

Is there any element of territoriality in the application of Hindu law?

2. What was the rule laid down in *Abraham v. Abraham* (9 Moore's Indian Appeals, 195) as regards the applicability of Hindu law to a Hindu convert to Christianity upon his conversion?

Does the rule hold good even now?

3. Write short notes on the origin of Hindu law, or on the origin of schools of Hindu law.

4. Write a short essay on the secular and religious aspects of Adoption, or of Marriage, among Hindus.

5. State the rights of reversioners in respect of alienations by a Hindu widow of her husband's estate.

Or,

Discuss the principles of succession under the Dayabhaga and under the Mitakshara school of Hindu law.

## SECOND HALF

*Examiners*— { MR. SANATKUMAR CHATTERJEE, M.A., B.L.  
,, AMBUJNATH BANERJEE, M.A., B.L.  
,, INDUPRAKAS CHATTERJEE, M.A., B.L.

1. What is meant by an 'antecedent debt'?

Discuss, with reference to decided cases, whether the obligation of a son to pay his father's debts under the Mitakshara accrues during the lifetime of the father, or arises upon his death.

2. Who are the persons entitled to a share upon partition?

What are the rights of a son born after partition?

Or,

On what basis can accounts be claimed against the managing member of a joint family at the time of partition?

3. An estate once vested cannot be divested. What is meant by this statement?

Illustrate the application of this proposition with reference to the right of a Hindu widow to divest a vested estate by adoption.

Or,

State the facts of *Bhoobun Moyes's case* (10 Moore's Indian Appeals, 279), and show how the rule laid down therein regarding limits of a Hindu widow's authority to adopt has been explained and amplified in subsequent decisions.

4. Define and specify the different kinds of *stridhana*, either under the *Mitakshasra*, or under the *Dayabhaga*.

Or,

Discuss the rights of a Hindu widow in respect of accumulations and savings from her husband's estates.

5. Who are the persons entitled to maintenance under Hindu law?

A Hindu testator leaves a will whereby he provides a definite sum as maintenance for his widow. The widow considers the sum to be inadequate. What is her remedy, if any?

## CONSTITUTIONAL LAW

*Paper-Setters*—{ MR. S. M. ROSE, M.A., BARRISTER-AT-LAW.  
,, PRAMATHANATH BANERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.

*The questions are of equal value*

*Candidates will answer TEN questions in all; FIVE from the FIRST HALF  
and FIVE from the SECOND HALF*

*Credit will be given for reference to decided cases*

### FIRST HALF

*Examiners*—{ MR. A. S. M. LATIFUR RAHAMAN, M.A., LL.B.,  
BARRISTER-AT-LAW.  
,, AHMED ALI KHAN  
Dr. H. N. SANYAL, M.A., PH.D.,  
BARRISTER-AT-LAW.

1. 'There is not only a sovereign legislature but also a sovereign executive in the English constitution, each being supreme in its own sphere.' (*Sarvadhikari*.) Explain.

2. What kind of constitution should you have for India—rigid or flexible, and why?

3. How has the security of tenure of the Judges of the superior Courts been guaranteed in (i) England, (ii) India?

4. Comment on the following :—

(a) 'No scutage or aid is to be levied without the consent of the common concilium except the three customary aids.' (*Magna Charta*.)

(b) 'The pretended power of dispensing with laws or the execution of laws as it hath been assumed and exercised of late is illegal.' (*Bill of Rights*.)

5. What do you understand by the prerogative writs of (i) habeas corpus, (ii) mandamus, (iii) certiorari? Are they available in India?
6. Distinguish between any two of the following :—
  - (a) Impeachment and Bill of Attainder.
  - (b) A Public Bill and a Private Bill.
  - (c) A Crown Colony and a Protectorate.
7. Discuss the principles of law involved in—

*Either,*

*Stockdale v. Hansard*, 9 Ad. & E.I.,

 $O\tau.$ 

*Spooner v. Judds*, 4 M.I.A. 353.

## SECOND HALF

MR. JYOTIPRASAD SARBADHIKARI, M.A., B.L.

*Examiners—* { „ BIRESWAR BAGCHI, M.A., B.L.,  
 „ SANJIBKUMAR CHAUDHURI, M.A., B.L.,  
 BARRISTER-AT-LAW.

1. Write notes on any two of the following :—
  - (a) Extradition, (b) the Riot Act (1 Ges. I St. 2 C. 5), (c) Parliament Act, 1911.
2. State concisely the principles of law laid down in any two of the following :—
  - (a) *Bradlaugh v. Gosset*, (1884) 12 Q.B.D. 271.
  - (b) *Musgrove v. Pulido*, (1879) 5 A.C. 102.
  - (c) *Wise v. Dunning*, (1902) 1 K.B. 167.
3. Give an account of the English law of Treason.
4. Enumerate the constitutional checks upon the improper exercise of prerogative by the Executive in England.
5. What do you mean by the 'Established Church' of England? Has the Church in England got any legislative powers? If so, what are they?
6. What do you mean by Martial Law? How does it differ from military law? Can the Crown declare martial law in (i) England, (ii) India, in time of peace?
7. How far can the Courts in England adjudicate on questions of parliamentary privilege?



# July, 1932

## JURISPRUDENCE

*Paper-Setters*—{ MR. B. C. GHOSH  
,, RUPENDRAKUMAR MITRA, M.Sc., M.L.

*The figures in the margin indicate full marks*  
*Only FIVE questions (in EACH half) to be attempted*

### FIRST HALF

*Examiners*—{ MR. SITARAM BANERJEE, M.A., B.L.  
,, AZIZ RAHIM, M.A., BARRISTER-AT-LAW.  
,, SATYENDRAKISOR GHOSH, M.A., B.L.

1. Define law from the point of view of the jurist. 10
2. Write a short note on *sovereignty*. 10
3. Explain fully the conception of *right*. 10
4. Enumerate the elements of custom, and explain on what theory it is treated as law. 10
5. 'Law is a great deal more than command.' Explain. 10
6. Write a short note on *artificial* persons. 10
7. Define any two of the following :— 10
  - (a) Juristic act, (b) licenses, (c) real servitudes, (d) corporation.

### SECOND HALF

*Examiners*—{ MR. P. MITTER, M.A., BARRISTER-AT-LAW  
,, M. N. MITTER, M.A., B.L.,  
BARRISTER-AT-LAW.  
,, N. K. GHOSH, M.A., BARRISTER-AT-LAW.

1. Explain and criticise Savigny's theory of contract. 10
  2. Analyse the concept of *possession*. 10
  3. Examine the nature of International Law from the jurist's point of view. 10
- Write a short note on *legal fictions*, noticing in particular their importance in ancient legal systems. 10

Or,

- 'The progress of society is from status to contract.' Explain. 10
5. 'The Jus Naturale is simply the Jus Gentium seen in the light of a particular theory.' Explain fully. 10

Or,

- Bring out the distinction between *tort* and *crime*, and in that light explain the following passage of Sir Henry Maine :— 10
- 'The penal law of ancient communities is not the law of crimes; it is the law of wrongs.'

## ROMAN LAW AND PRINCIPLES OF LEGISLATION

Paper-Setters—{ MR. S. C. CHAUDHURI, M.A., LL.B.,  
BARRISTER-AT-LAW  
DR. BIJANKUMAR MOOKERJEE, M.A., D.L.

*The figures in the margin indicate full marks*

*Only FIVE questions need be answered in EACH half*

## FIRST HALF

Examiners—{ MR. A. K. HAJRA, B.A. (OXON.),  
BARRISTER-AT-LAW.  
DR. S. C. CHAUDHURI, M.A., LL.D.,  
BARRISTER-AT-LAW.  
MR. BIRENDRAKUMAR DE, M.A., B.L.

1. Would it be right to describe slaves as 'rightless entities' in Roman Law? 10
2. Did the Roman jurists look upon theft as a crime or a civil wrong? Give your reasons. 10
3. What were '*servitudes*' in Roman Law? Discuss fully. 10
4. Write short notes on *any four* of the following :— 10
  - (a) *Adjudicatio*.
  - (b) *Fructum perceptio*.
  - (c) *Usucapio*.
  - (d) *Traditio*.
  - (e) *Mancipatio*.
  - (f) *In jure cessio*.
5. What rights were conferred on the adoptees by adoption in Roman Law? 10
6. Compare the Roman *Emphyteusis* with the modern 'bailment'. 10
7. Distinguish clearly between the *Falcidian Fourth* and the *legitim*. 10

## SECOND HALF

Examiners—{ DR. S.C. BAGCHI, B.A., LL.B., LL.D.,  
BARRISTER-AT-LAW.  
MR. S. N. BHATTACHARYYA, B.A.,  
BARRISTER-AT-LAW.  
,, KARUNAMAY BOSE, M.A., B.L.

1. On what grounds could a contract be set aside in Roman times? 10
2. What importance do you attach to the XII Tables in the development of Roman Law? 10
3. A child, aged nine years, throws a stone and injures a Roman citizen. Would an Aquilian action lie in respect of such injury? Against whom should the action for damages be preferred? 10

*Or,*

Discuss the principal defences that may be urged against an action for damages under the *Lex Aquilia*. 10

4. 'The Law of Nature is merely the dictate of common sense.' 10  
Discuss this dictum from the standpoint of Maine.
5. A and B are the joint owners of a slave S. A employs S on a 10  
piece of work of a dangerous nature, as a result of which S is killed.  
What damages, if any, can B recover from A under the *Lex Aquilia*?
6. What do you understand by 'Legal fiction'? Can you cite an 10  
instance of legal fiction which continues to be accepted in modern times?
7. What, in your opinion, are the advantages of the historical study 10  
of law?

## HINDU LAW

*Paper-Setters*—{ THE HON'BLE MR. JUSTICE M. N. MOOKHERJEE, M.A., B.L.  
MR. BRAJENDRANATH CHATTERJEE.

*The figures in the margin indicate full marks*

## FIRST HALF

*Examiners*—{ MR. JAJNESWAR MAJUMDER, M.A., M.L.  
,, BIRENDRANATH DAS, M.A., B.L.  
,, MANINDRAKUMAR BASU, M.A., B.L.

*Reasons, where possible, should be given for the answer*

1. What are the requisites of a custom to be valid under the Hindu 10  
Law? Can a well-established custom override the express provisions of  
Hindu Law and of Statutory Law? State briefly the changes effected in  
Hindu Law by Statutory Law in the current century.
2. Explain, with illustrations, the two following propositions :— 10  
(a) 'Adoption has been spoken of as a new birth in many cases.'  
(b) 'An estate once vested cannot be divested.' Are there  
exceptions to this rule?
3. A Hindu widow of Bengal gave away one of her sons in adoption. 10  
The adoptee on attaining majority claimed his share in the properties  
left by his natural father. Discuss the merits and demerits of his claim.  
Would it make any difference if he were given in adoption by his natural  
father?

Or,

In a Mitakshara family one of the sons was given in adoption by  
the father. The adoptee on attaining majority claimed his share in his  
natural ancestral property. Discuss the merits and demerits of his claim.  
Would it make any difference had the adoption taken place after partition  
between the father and the sons?

4. What is the doctrine of *factum valet*? In what cases is it appli- 10  
cable and in what not? Would it be correct to say that the estate inheri-  
ted by a Hindu female is a life-estate?

Or,

A Hindu died leaving him surviving a childless widow and two  
sons. What rights has the widow to the estate left by her husband?

5. Answer any one of the following questions :—

10

A Brahmin having a son and a wife became a *Bairagi* for the purpose of marrying a *Sudra*, and had a son by his *Sudra* wife. After his death intestate, which of the sons will get his properties?

Or,

A Hindu girl of tender age was married to an old man by her guardian in contravention of an order of the Court forbidding the marriage. The girl, as soon as she attained majority and before consummation of the marriage, repudiated the marriage. Can the marriage be dissolved?

Or,

A, a Hindu, adopted a son, but a son was afterwards born to him; on which, he gave away in adoption the adopted son to B who duly adopted the boy after performing the necessary ceremonies. Discuss the rights of the adopted son to inherit the properties of A and B after their death.

## SECOND HALF

Examiners—{ MR. BRAJENDRANATH CHATTERJEE, M.A., B.L.  
 ,, SARATCHANDRA LAHIRI, M.A., B.L.  
 ,, BIRESWAR BAGCHI, M.A., B.L.

*Reasons, where possible, should be given for the answer*

1. What is meant by survivorship as regards properties governed by the Hindu Law of Succession? Give instances of survivorship under the Dayabhaga School. What is succession *per stripes* and succession *per capita*? Give instances of such succession under the Hindu Law. 10

2. What rights has a son, born to a Mitakshara father after he has alienated the family property, to question the alienation? 10

Or,

A Hindu widow in possession of her husband's estate dedicated a portion of the estate to the family deity for the performance of the *pūja*. Discuss how far the dedication is binding upon the reversioners.

3. What are the liabilities of the sons of a Hindu to repay their father's debts? Are they bound to repay the time-barred debts of the father? 10

A Hindu of Benares paid off his barred debts with the money raised by mortgaging the ancestral property. Will the mortgage be binding upon his sons?

Or,

A, B, C, D were four brothers living in a joint Mitakshara family. A brought a suit for partition; the three other brothers filed a written statement, objecting to the partition and, in the alternative, claiming to remain joint among themselves. During the pendency of the suit, A and B died leaving childless widows. What would be the rights of these widows to the ancestral property?

4. Answer any one of the following questions :—

10

A, B, C were three brothers. A had one son and B had two sons, and C was unmarried. B died, then A murdered C and was convicted and hanged. How will succession take place to the estate left by C?

Or,

A Hindu widow, in possession of her husband's estate, constructed two buildings at considerable costs with the surplus income of the estate, one upon a plot of land belonging to the estate and the other upon a plot purchased by her with the savings from the income of the estate. She died leaving her surviving her husband's sister's son and her own sister's son. Who will get the buildings?

Or,

A Hindu of Bengal died leaving him surviving a widow, a daughter and her son, and a sister's son. The widow surrendered the estate inherited from her husband to the daughter's son. The daughter's son afterwards died leaving a son. Then the widow and the daughter died one after the other. Who is entitled to the estate?

5. State the principles enunciated  
in the Full Bench case of *Guru Govinda Shaha Mondol v. Ananda Lal Ghosh* (15 B.L.R. 15); 10

or,

in the Privy Council case of *Brij Narain Rai v. Mangla Prasad* (57 I.A. 129). Compare this decision with that in the P.C. case of *Sahu Ram v. Bhup Sing* (44 I.A. 127).

## CONSTITUTIONAL LAW

<i>Paper-Setters</i> —	{ THE HON'BLE MR. JUSTICE A. K. RAY. MR. PRAMATHANATH BANERJEE, M.A., B.L., <span style="display: block; text-align: right;">BARRISTER-AT-LAW.</span>
<i>Examiners</i> —	{ MR. P. K. SEN. „ A. S. M. LATIFUR RAHAMAN M.A., LL.B., <span style="display: block; text-align: right;">BARRISTER-AT-LAW.</span> DR. ASWINIKUMAR CHAUDHURI, M.A., LL.D., <span style="display: block; text-align: right;">BARRISTER-AT-LAW.</span>

*Candidates are permitted to answer TEN questions in all : FIVE from  
the First Half and FIVE from the Second Half*

*All questions are of equal value*

### FIRST HALF

1. Explain the distinction between sovereign and non-sovereign legislatures. In what sense and how far are the legislatures of (i) the Dominion of Canada, (ii) India, non-sovereign?

2. Enumerate the sources of English Constitutional Law.

3. Comment on *any two* of the following :—

(a) No *scutage* or *aids* is to be levied without the consent of the *commune concilium* excepting the three customary feudal *aids*. (*Magna Carta*.)

(b) The levying of money for or to the use of the Crown by the pretence of prerogative without the grant of Parliament for longer time or in other manner than the same is or shall be granted is illegal. (*Bill of Rights*.)

(c) No pardon under the Great Seal is to be a bar to impeachment by the Commons in Parliament. (*Act of Settlement*.)

4 'Barring a few exceptions there is the same equality of all persons before the law in India as in England.' (*Sarradhiakari*.) Discuss.

5. What do you mean by 'prerogative writs'? How far can the High Courts in India issue prerogative writs in cases of administrative illegalities?

6. Distinguish between :—

(i) Allegiance and domicile, (ii) impeachment and bill of attainder, (iii) a Crown colony and a Protectorate.

7. Discuss any two of the following :—

(a) X proposes to hold an open-air meeting in support of an unpopular cause. Y and others organise an opposition and the local Magistrate, fearing a disturbance, forbids X to hold his meeting. Advise X.

(b) X commits a political offence in Madras and goes to French Pondicherry. Can he be arrested by British Indian authorities at Pondicherry?

(c) X is committed under a warrant of the Speaker of the House of Commons. Can he challenge the legality of the Speaker's act? If so, how?

(d) A Judge of the Calcutta High Court calls a witness before him 'a knave, a scoundrel, and a rascal'. Has the witness any remedies against the Judge?

## SECOND HALF

Examiners— { MR. JYOTIPRASAD SARBADHIKARI, M.A., B.L.  
S. K. DATTA, M.A., BARRISTER-AT-LAW.  
DR. H. N. SANYAL, M.A., PH.D., BARRISTER-AT-LAW.

Attempt FIVE questions only

8. Discuss the principles of law involved in—

either,

*Empress v. Bina Singh*, 5 I.A. 178;

or,

*Ex parte D. F. Maris*, (1902) A.C. 109.

9. Write notes on any two of the following cases :—

(i) *Girindra v. Birendra*, 31 Cwn. 593, (ii) *Hampden's case*, 3 St. tr. 825, (iii) *Seven Bishops' case*, 12 St. tr 183, (iv) *Stockdale v. Hansard*, 9 Ad. & E 1.

10. 'A treason is a violation of allegiance, not only by those who owe natural allegiance but by those who owe acquired or local allegiance.' (*Sarradhiakari*.) Explain. What is the position of the present law of treason in England?

11. (a) Can the Crown by the mere exercise of prerogative create new Courts in (i) England, (ii) India, (iii) Natal?

(b) How has the security of tenure of the Judges of the High Courts been guaranteed in (i) England, (ii) India?

12. Can the subject in England proceed against a minister of the Crown for (i) torts committed by him in the discharge of official duties, (ii) breaches of contract in his official capacity?

13. What do you mean by the doctrine of ministerial responsibility in England? Does such responsibility exist in Bengal? If so, to what extent?

14. Write short notes on any two of the following :—

(i) Secretary of State for India, (ii) The Lord Chancellor, (iii) The Ordinance power of the Viceroy and Governor-General in India, (iv) The Regulating Act, 1773 (13 Geo. III C. 63).

# Intermediate Examination in Law, January, 1932

## MAHOMEDAN LAW AND LAW OF PERSONS

*Paper-Setters*— { SIR. A. SUHRAWARDY, KT., M.A., PH.D.,  
BARRISTER-AT-LAW.  
MR. NURUDDIN AHMAD.

*The figures in the margin indicate full marks*

### FIRST HALF

*Examiners*— { SIR. A. SUHRAWARDY, KT., M.A., PH.D.,  
BARRISTER-AT-LAW.  
MR. ASRAF ALI, M.A., BARRISTER-AT-LAW

1. What are the sources of Mahomedan Law? Who are the three great exponents of the Hanafi school of Muslim Law and what are the general rules of interpretation of Hanafi Law? 10

2. (a) What is the limit of testamentary power and of Hiba under the Mahomedan Law? Distinguish between Hiba and Hiba Bil Ewaz, and explain the legal effect of gift and an acknowledgment of debt during *Marazul-maut*. 10

Or,

(b) What is Shufaā or pre-emption, and who may claim it? What are the necessary formalities which a claimant to the right of pre-emption has to observe before he is entitled to it?

3. What do you understand by the term *waqf*, and how is it constituted? What is the legal effect of a dedication during *Marazul-maut*? Is there any limit to the power of a person to dedicate property by way of *waqf*? Can (a) a *waqf inter viros* or (b) a testamentary *waqf* be revoked? Has the Waqf Validating Act effected any change in the Muslim Law of *waqf* as interpreted previously to that enactment? 10

4. Explain any three of the following :— 10  
*Marazul-maut*, *Mushaa*, Increase Return, *Shufaā*, True grandfather, False grandfather, *Mahrul-misl*.

5. Discuss the principles enunciated in any one of the following :— 10

(a) *Ashrafuddaula v. Hyder Husein* (11 M.I.A. 94).

(b) *Rani Khujurunnisa v. Raushan Jehan* (3 I.A. 291).

(c) *Kheja Sabmullah v. Abul Khair Mahomed Mustafa* (87 Cal. 263).

## SECOND HALF

Examiners—{ MR. NURUDDIN AHMED, M.A., B.L.  
 ,, BIRESWAR CHATTERJEE, M.A., B.L.

1. Who are natural born British subjects? Does the law provide any means whereby a person, though not a natural born British subject, may yet acquire that status? 10

2. (a) What is the extent of the legal duty of parents in England in the matter of the education of their children? 10

Or,

(b) What powers and duties have parents over their (i) legitimate and (ii) illegitimate children?

3. Write a short note on the liability of the master for the tortious act of his servant. 10

4. What is the age of majority under the English Law? In what respect does it differ from the provisions of the Indian Majority Act? 10

A, a Muslim, was born on the 4th September, 1928, and a guardian of his property was appointed by the Court. When does he attain majority for the purpose of contracting (a) a valid marriage, and (b) a mortgage of his property?

5. Discuss the principles enunciated in any one of the following cases :— 10

(a) *Udny v. Udny* (1 H.L. 441).

(b) *Abraham v. Abraham* (9 M.L.A. 105).

(c) *Lala Khunni Lall v. Kunwar Gobind Krishna* (38 I.A. 87).

## TRANSFER OF PROPERTY

*The figures in the margin indicate full marks*

*FIVE questions only in each half to be attempted*

Paper-Setters—{ THE HON'BLE MR. JUSTICE S. K. GHOSH, M.A.,  
 ,, I.C.S.  
 { MR. RUPENDRAKUMAR MITRA, M.Sc., M.L.

## FIRST HALF

Examiners—{ MR. GOPENDRANATH DAS, M.A., B.L.  
 ,, SUSILKUMAR BOSE, M.A., B.L.

1. What do you understand by 'the rule against perpetuity'? Clearly formulate the principle underlying the said rule. 10

2. Define the limits within which a conditional transfer of property is sanctioned by law. Illustrate by examples the principle that 'a condition precedent has only to be substantially complied with, but a condition subsequent must be strictly fulfilled'. 10

3. Define and discuss the principle on which the validity of transfer by an ostensible owner is upheld. 10



4. Discuss the principle of *lis pendens* as applied to transfer of property. 10

5. Formulate and discuss the principle on which transfer of property non-existent at the date of the transfer is supported. 10

6. A purchases at an execution sale immoveable property X. He does not know at the time that it is subject to mortgage. Subsequently he discovers that it is subject to two mortgages—the first being a usufructuary one in favour of M, and the second being in favour of N. There is a covenant in the mortgage executed in favour of N that N would get and retain possession till his debt is paid after the debt due to M is satisfied. On coming to know of these mortgages A pays up M. N then sues A for possession. Can A successfully resist the suit? If so, on what grounds? 10

7. A grants to B a lease of a revenue-paying property, the lessor undertaking to pay revenue. There is a covenant in the lease that if the property is sold for arrears of revenue, the lessor shall make good the loss of the lessee. A thereafter transfers his interest to C, and thereafter, on account of default in the payment of revenue, the property is sold, and B, the lessee, suffers loss to the extent of Rs. 1,000. B sues A for the loss. What is your answer? Give reasons. 10

## SECOND HALF

Examiners—{ Mr. DHIRENDRAKRISHNA ROY, B.L.  
,, MAHIMAMUKUL HAJRA, M.A., B.L.

1. Enumerate the different kinds of mortgage and state their distinctive features. 10

2. 'Once a mortgage, always a mortgage, and nothing but a mortgage.' Explain and Discuss. 10

3. Briefly state the facts and the principles formulated in *Lala Achal Ram v. Kazim Hossein Khan*, I.L.R. 27 All. 271 = L.R. 32 I.A. 113. 10

4. (a) What are the penalties attached to non-registration of a compulsorily registrable instrument? 5

(b) How can a valid transfer be effected of (i) tangible immoveable property, (ii) intangible things? 5

5. Under what contingencies can a lease be forfeited and the tenant turned out with the help of the Court? Can the Court under any circumstance grant the tenant any relief when his lease has been determined by forfeiture? If so, state those circumstances. 10

6. A, a Hindu, makes an oral gift of immoveable property to his son B, and delivers possession to him. B, being subsequently dispossessed by a trespasser C, institutes a suit for possession. The law is that a person cannot recover possession unless he can prove title. Can B succeed in the suit? Would it make any difference if the donor had been a Mahomedan? 10

7. A institutes a suit against B for possession of a house. The suit ends in compromise by which A and B divide the house half and half and they also demarcate their respective portions. The terms of the compromise are embodied in a decree which is not registered. Is the partition of the house a binding arrangement? 10

REAL PROPERTY AND SUCCESSION

*Paper-Settlers*—{ Mr. H. D. BOSE, M.A., BARRISTER-AT-LAW.  
,, D. N. MITTER, B.Sc., LL.B.,  
BARRISTER-AT-LAW.

*The figures in the margin indicate full marks*

*Answer ANY FIVE from each half*

FIRST HALF

*Examiners*—{ Mr. RAMENDRAMOHAN MAJUMDAR, M.Sc., B.L.  
,, D. N. MITTER, B.Sc., LL.B.,  
BARRISTER-AT-LAW.

1. What is the distinction in English Law between property in land and property in goods? 10  
Is personal property synonymous with moveable property?
2. Explain *any two* of the following terms :— 10  
(a) Estate pur autre vie, (b) Chattel Real, (c) Merger, (d) Base fee.
3. Distinguish between (a) Corporeal and Incorporeal hereditaments, 10  
(b) Joint tenancy and tenancy in common.
4. Explain remainder and reversion. Illustrate the points of difference between contingent remainder and executory devise by means of example. 10
5. What do you understand by the maxim 'Once a mortgage always a mortgage'? What are equitable mortgages? 10
6. Explain the phrase 'tenant for life.' What are the powers of a tenant for life, under the Settled Land Act of 1925? 10
7. State the facts and explain the principles involved in the case of— 10  
(a) *Van Grutten v. Foxwell* (1897) A.C. 658.

*Or,*

(b) *Morley v. Bird*, 3 Ves 629.

SECOND HALF

*Examiners*—{ Mr. PRAPHULLACHANDRA CHAKRABARTI  
,, SUDHIRKUMAR BHOSLE, M.A., B.L.

1. Explain *any two* of the following terms :— 10  
(a) Election, (b) Contingent bequest, (c) Demonstrative legacy, (d) Administration de bonis non.
2. What is domicile of origin? How does domicile affect succession to one's properties? 10
3. Explain specific legacy. 10  
Can the following legacies be placed under the heading of specific legacy?—  
(a) A bequeaths to B Rs. 50,000 of his property now in the shares of Banga Luxmi Cotton Mills.  
(b) A bequeaths to B Rs. 20,000 of his funded property.

4. What is the difference between probate and letters of administration? What is just cause for revocation of grant of probate? 10

5. Explain 'privileged will.' 10

A, a Hindu, executes a will with regard to his properties; he verbally revokes the will, but the will is not destroyed. Is the revocation valid?

6. What do you understand by donatio mortis causa? Explain the law in regard to donatio mortis causa. 10

7. State the facts and explain the principles involved in the case of— 10

(a) *Alangamonjori v. Sonamani Dabee*, I.L.R. 8 Cal. 637;

Or,

(b) *Ramlal Mookerjee v. The Secretary of State for India in Council*, I.L.R. 7 Cal. 304 (P.C.).

## CONTRACTS AND TORTS

*Paper-Setters*— $\left\{ \begin{array}{l} \text{THE HON'BLE MR. JUSTICE J. R. LORT-WILLIAMS,} \\ \text{K.C.} \\ \text{MR. S. P. MOOKERJEE, M.A., B.L.,} \\ \text{BARRISTER-AT-LAW.} \end{array} \right.$

*The questions are of equal value*

### FIRST HALF

*Answer ANY FIVE of the following questions*

*Examiners*— $\left\{ \begin{array}{l} \text{MR. J. N. MAJUMDAR, M.A., B.L.,} \\ \text{BARRISTER-AT-LAW,} \\ \text{,, S. P. MOOKERJEE, M.A., B.L.,} \\ \text{BARRISTER-AT-LAW.} \end{array} \right.$

1. Define *Consideration*, *Reciprocal Promises*, *Void* and *voidable contracts* (Section 2 of the Indian Contract Act). Give illustrations.

2. Discuss the contractual liability of minors under the English and the Indian Law, and refer to the decision of the Privy Council in *Mohori Bibee v. Dharmadas Ghosh*.

3. Define fraud and explain its effect upon the validity of a contract.

4. Explain the following, giving illustrations: *Merger*, *warranty*, *estoppel*, *quantum meruit*.

5. In what cases may a Court dissolve a partnership under the Contract Act?

6. Explain and illustrate how far a Court will uphold agreements in restraint of trade.

7. State the principles decided in two of the following cases:—

(a) *Derry v. Peak*; (b) *Lumley v. Gye*; (c) *Carlisle v. Carbolic Smoke Ball & Co.*

SECOND HALF

Examiners—{ MR. PRAPHULLACHANDRA GHOSH, M.A., B.L.  
LIEUT. SIBANIPRASAD CHAUDHURI, M.A., B.L.,  
BARRISTER-AT-LAW.

Answer ANY FIVE of the following questions

1. Discuss the assignability of contractual rights by act of the parties.
2. Explain *An Act of State*; *Volenti non fit injuria*.
3. Explain negligence and discuss by giving examples what you understand by contributory negligence.
4. Explain nominal, substantial, and exemplary damages. Discuss what damages are considered to be too remote.
5. What do you understand by the natural and probable consequence of an act in Tort? Give examples.
6. When is publication of a libel said to be complete?  
Is publication complete in the following cases?—  
(a) A sends a telegram to B containing a libel against B.  
(b) A writes a registered letter to B containing a libel against B.  
Would it make any difference if A dictated his letter to his typist?  
(c) A writes a letter to C, his wife, which contains a libel against B.  
Would it make any difference if C was B's wife?
7. State the principles laid down in the following cases :—  
(a) *Moghul Steamship Co., Ltd. v. McGregor Gow & Co.*; (b) *Indermaur v. Dames*.

July, 1932

MAHOMEDAN LAW AND THE LAW OF PERSONS

Paper-Settlers—{ SIR Z. R. ZAHID SUHRAWARDY, KT.  
MR. NURUDDIN AHMAD

The figures in the margin indicate full marks

FIRST HALF

Examiners—{ SIR A. SUHRAWARDY, KT., M.A., PH.D.,  
BARRISTER-AT-LAW.  
MR. A. QUASEEM, B.A., LL.B.,  
BARRISTER-AT-LAW.

1. Enumerate the different classes of heirs under the Hanafi law, and explain their respective position in the scheme of inheritance under that law. 10
2. Explain the term 'waqf,' giving its literal and secondary meanings. How is waqf constituted? What is the legal effect of a waqf during *Marzul maut*? Is there any limit to the capacity of a person to dedicate property 10

by way of *waqf*? Can (a) a *waqf* inter vivos, or (b) a testamentary *waqf*, be revoked? Has the Waqf Validating Act effected any change in the Muslim law of *waqf* as judicially interpreted previously to that enactment?

3. (a) Who can make a will under the Mahomedan law, and is there any limit to testamentary power under that law? 10

Or,

(b) Is a bequest to one of the heirs or to an unborn person valid? Can a Mahomedan will be proved without a probate being obtained? 10

4. Explain the term *iddat*. When does the *iddat* of (a) a widow, (b) a divorced woman, (c) a pregnant woman terminate? Can a valid marriage take place before the expiry of the period of *iddat*? 10

5. Discuss the principles enunciated in any one of the following cases :— 10

(a) *Baker Ali v. Anjuman Ara*, 30 I.A. 94=25 All. 236.

(b) *Ashrafuddaula v. Hyder Hussain*, 11 Mad. I.A. 94.

(c) *Khaja Salimullah v. Abdul Khair*, 37 Cal. 263.

## SECOND HALF

Examiners—{ MR. M. A. ISPAHANI, M.A., BARRISTER-AT LAW.  
,, PANCHANAN GHOSH, M.A., B.L.

1. A, B, C were born in British India on the 20th January, 1920. 10

In a suit in which A is a party, a guardian ad litem for him was appointed on the 18th March, 1927.

The estate of B was placed under the management of the Court of Wards on the 5th April, 1929.

A guardian of the person of C was appointed by the District Judge of Hughly on the 11th August, 1930.

When do A, B and C attain majority?

2. Explain the maxim : 'The King can do no wrong,' and state its practical consequences. 10

3. (a) When does an action lie for procuring a breach of a contract for service? In order to sustain such an action is it necessary to prove malicious intention to injure? 10

Or,

(b) Discuss the status of a child born, but not begotten, in wedlock according to the English and Mahomedan law. 10

4. What is the effect of coverture on the real properties of a married woman under the English law? Indicate the nature of the statutory modifications of the law in this respect. 10

5. Discuss the principles enunciated in any one of the following cases :— 10

(a) *Khunri Lall v. Gobind Krishna*, 33 I.A. 87=33 All. 856.

(b) *Skinner v. Orde*, 14 M. I.A. 309.

(c) *Abraham v. Abraham*, 9 M. I.A. 195.

## INTERMEDIATE EXAMINATION IN LAW

### TRANSFER OF PROPERTY

*Paper-Setters*—{MR. C. C. BISWAS  
,, BIRENDRANATH MITTER

*Answer ANY FIVE questions in EACH half, but either Question 6 or Question 7 must be one of them in the Second Half*

#### FIRST HALF

*Examiners*—{MR. BIJAYKUMAR BHATTACHARYYA, M.A., B.L.  
,, RAMENDRACHANDRA RAY, M.A., B.L.

1. State the legal effect of conditions in a deed of transfer of immoveable property, restraining the power of alienation (a) when such restraint is absolute, and (b) when it is qualified.

What exceptions are there to the general rule?

A lease for 99 years provides for its determination and for re-entry by the lessor—

(a) in case the lessee assigns the lease to a stranger without the written consent of the lessor,

(b) in case the lessee is adjudicated an insolvent.

The lessee assigns the lease without reference to the lessor. The lessee is adjudged an insolvent. What is the position of the lessor in either case?

2. In what circumstances is a transfer of immoveable property by an ostensible owner binding on the real owner?

State the principle involved.

Does the principle apply to a Court sale in execution of a decree against the ostensible owner?

Can a donee under a deed of gift from a *benamdar* claim the benefit of the rule?

Will the rule apply when the real owner is a minor, represented by a guardian appointed by the Court?

3. State and explain the doctrine of '*lis pendens*' as embodied in the Transfer of Property Act.

Is it correct to speak of '*lis pendens*' as affecting a purchaser through the doctrine of notice?

Refer to decided cases.

4. State and explain the doctrine of *election* as embodied in the Transfer of Property Act.

Can a person successfully take the plea that he has obtained the benefit of a transaction in his personal capacity and has dissented from it in his fiduciary capacity?

A, without C's knowledge or consent, by a deed of gift transfers to B a house belonging to C, and by the same deed gives C a coal-mine belonging to A. C on hearing of the same, takes possession of the mine, works it for six months, and exhausts it. Can C now claim his house from B by refusing to take the coal-mine?

5. Define the term '*attested*.' How have the Amending Acts of 1926 and 1927 modified the previous law on the subject?

A mortgage was executed by a *pardanashin* lady from behind the *pardah*. The witnesses did not see her sign, but received acknowledgment of her signature from the lady, and then signed their names. Is the attestation valid?

If the lady did not answer the witnesses direct as to whether she had signed her name or not, but conveyed the message of her signature to them through her son, who identified the lady to the witnesses, would it make any difference?

6. When is a person said to have notice of a fact?

How far is notice to an agent notice to the principal?

A employed a solicitor B to act for him in the matter of a mortgage transaction. B knew that the mortgagor's wife C had obtained a decree for maintenance, declaring a charge on the property to be mortgaged. The decree was not registered. B did not disclose the existence of this decree to A, who advanced the money to the mortgagor *bona fide*. Would C's claim prevail against A's registered mortgage?

Would it make any difference in your answer—

(a) if C requested B not to disclose the decree to A, lest A should refuse to advance the money,

(b) if B came to know of the decree otherwise than in connection with the investigation of title to the mortgaged property or in the course of the mortgage transaction?

7. A purchased an immoveable property in the *benami* of B. The title-deeds of the property remained with B. B collected the rents of the property in his own name. B fraudulently mortgaged the property to X for valuable consideration without the knowledge of A. Can A establish his title to the property free from X's mortgage?

Would it make any difference if A was in actual possession of the property at the time X inspected the property before advancing the money to B?

## SECOND HALF

Examiners—{ Mr. ANILENDRANATH RAYCHAUDHURI, M.A., B.L.  
 ,, P. C. BOSE, M.A., B.L.,  
 BARRISTER-AT-LAW.

1. Distinguish between a mortgage and a charge.

Can the plea of a *bona fide* purchaser for value without notice avail against (a) a mortgagee, (b) a charge-holder?

Is it correct to say that if a mortgage deed is not properly attested, the instrument may still operate as creating a charge?

2. 'Once a mortgage, always a mortgage.' Discuss the origin and meaning of the doctrine and its application in Indian law. Is there any specific provision on the subject in the Transfer of Property Act? Refer to decided cases.

3. Define an actionable claim, and state the law regarding the transfer of actionable claims.

Can a person taking a negotiable instrument in good faith obtain title to it independently of the title of the person from whom he takes it?

4. 'The doctrine of *Toulmin v. Steere*, (1817) 3 Mer., 210 is not applicable to Indian conditions, except as the law of justice, equity, and good conscience.'

Cite the authority for this statement, and elucidate.

5. A enters into an open contract for the sale of his house to B for a stipulated price. The sale is to be completed in six months' time. Does the contract create any interest in the house in favour of B?

What are the respective rights and liabilities of the parties, pending completion in regard to—

(a) rents and taxes,

(b) damage caused to the property by the negligence of A,

(c) the existence of latent defects or latent advantages in the property?

6. What is the effect of non-registration of a document which is required to be registered under the Indian Registration Act or the Transfer of Property Act?

*A* executes a lease of his land to *B* for 9 years. The lease contains a stipulation that if *B* should incur any loss in consequence of disputes relating to the land between *A* and his relations, *A* should indemnify *B* for the loss. Two years after the lease, such disputes occur, and *C*, a relation of *A*, obtains a decree against *A* and *B* for possession of the land with mesne profits. *B* is dispossessed in consequence, and has also to pay mesne profits to *C*. *B* then sues *A* to recover damages under the indemnity clause contained in the lease. *A* objects that the lease not being registered, it is not admissible in evidence to prove his liability.

Discuss the validity of the objection.

7. What are the rules governing the priority of a registered over an un-registered document?

*A* executes a mortgage deed of his property to *B* to secure an advance of Rs. 50. The deed is not registered. *A* then sells the same property to *C* by a registered deed. *C* had, at the date of his purchase, notice of the prior un-registered mortgage to *B*. Can *B*'s mortgage obtain priority over *C*'s purchase?

Would it make any difference if the amount secured by the mortgage was Rs. 500 and not Rs. 50?

## REAL PROPERTY AND SUCCESSION

*Super-Settlers*—{ DR. S. C. BAGCHI  
MR. KARUNAMAY BOSE

*The questions are of equal value*

### FIRST HALF

*Examiners*—{ MR. D. N. MITTER, B.Sc., LL.B.,  
BARRISTER-AT-LAW.  
,, RAMENDRAMOHAN MAJUMDAR, M.A., B.L.

*FIVE questions and no more need be attempted*

1. Can Real Property at the present day be accurately distinguished from Personal Property either (a) on the ground that the former alone is specifically recoverable, or (b) on the ground that the former alone descends to the heir-at-law in case of intestacy? With regard to each of the following, state whether it is Real Property or Personal Property, giving your reasons: (i) an heir-loom, (ii) a tenancy by *Elegit*, (iii) a rent charge.

*Or,*

In 1926, *A*, being tenant in fee simple of Whiteacre, Blackacre, and Greenacre, gave Whiteacre to a corporation having no licence to hold lands in mortmain, Blackacre to a hospital, and Greenacre to *X*. He received no consideration for any of these gifts which were carried out by ordinary deed of conveyance. In 1928, *X* sold Greenacre for £ 500 to *Y*. In January, 1932, *A* was made bankrupt. Advise his creditors.

2. Give a brief sketch of interests in land recognised by English Law. How has the hierarchy of legal estates been affected by the Law of Property Act, 1925?



8. Consider the legal effect of the following :—

- (1) Grant to A and his issue;
- (2) Devise to A and his issue;
- (3) Devise to A, but if he die without issue, to B;
- (4) Devise to A for life and then to his son for ever, but if A have no son, to B in fee simple.

4. What is the difference between Tenure and Estate? How was Tenure affected by (a) Quia Emptores, (b) the Statute of Tenures? What are the modern incidents of Freehold Tenure?

5. 'Some covenants run with the land.' Explain. What modification, if any, has been effected as to the burden of a covenant by the Law of Property Act, 1925?

6. To what extent and by what processes can a creditor reach his debtor's land during the debtor's lifetime?

7. Write a short essay on the evolution of the doctrine of Tenure.

### SECOND HALF

Examiners—{ Mr. J. BAROOAH, BARRISTER-AT-LAW.  
,, JYOTISCHANDRA SARKAR, M.A., B.L.

*FIVE questions and no more need be attempted*

1. Give a comparative outline of the scope and province of each of the following : The Indian Succession Act, The Hindu Will's Act, and the Probate and Administration Act.

2. Annotate any five of the following :—

Domicile, Demonstrative legacy, Ademption, Limited grant, District delegate, and Executor of his own wrong.

3. A bequest is made to 'A and his children'. What interests would vest (1) A, and (2) the children of A respectively? What would happen (a) if A dies before the testator, and (b) if A is a son of the testator?

4. Explain and illustrate the rule against perpetuity as applied to bequests.

5. Discuss the principle of election.

'A person who in his individual capacity takes a benefit under a will may in another character elect to take in opposition to the will.' Explain and illustrate this

6. Compare the executor with the administrator, noting similarities as well as dissimilarities.

7. Draw up a petition, stating all necessary particulars, for probate of a will intended to have effect throughout British India.

### CONTRACTS AND TORTS

Paper-Setters—{ THE HON'BLE MR. JUSTICE H. R. PANKRIDGE  
MR. S. P. MOOKERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.

*The questions are of equal value*

### FIRST HALF

Examiners—{ MR. S. P. MOOKERJEE, M.A., B.L.,  
BARRISTER-AT-LAW.  
,, J. N. MAJUMDAR, M.A., B.L.,  
BARRISTER-AT-LAW.

1. What is meant by the phrase, 'Time is of the essence of a contract?' What rules determine if time is of the essence of a contract?

2. State the facts of, and the principles in, *Carlile v. Carbolic Smoke Ball Co.*

Answer ANY THREE of the following six questions

3. What is the law relating to (i) acceptance of an offer made by correspondence, and (ii) revocation of such an offer? Give illustrations.

4. 'The Statute of Frauds is a weapon of defence, not offence.' Explain. Does the statute apply in India? Do you know of any contract which to be enforceable in India must be in writing?

5. How does a contract under seal differ from a simple contract according to English Law and Indian Law? Is a promise under seal enforceable if made (a) for no consideration, or (b) for past consideration?

6. Explain: 'Damages must not be too remote.' Distinguish between penalty and liquidated damages, and state how far the distinction is observed in the Indian Contract Act.

7. (a) A goes to B's shop and fraudulently represents himself to be a Maharaja and thereby induces B to sell him goods on credit. A fails to pay for the goods and C purchases them from A in good faith. Advise B.

(b) A advertises a lottery and invites subscriptions. B sends A Rs. 10 and obtains a ticket. The draw takes place, and B draws a blank and demands the return of his money. Advise B.

8. In what circumstances will one party to a contract be deemed to be in a position to dominate the will of the other party?

## SECOND HALF

Examiners—{MR. SANATKUMAR CHATTERJEE, M.A., B.L.  
,, P. C. SEN, BARRISTER-AT-LAW.

1. Discuss and illustrate the statements:—

- (a) *Injuria sine damno* is actionable;
- (b) *Damnum sine Injuria* is not actionable.

2. State the facts of, and the principles in, *Rylands v. Fletcher*.

Answer ANY THREE of the following six questions

3. Define a tort and distinguish it from a breach of contract and a crime. Can the same act be a tort, a breach of contract, and a crime? Illustrate.

4. Which of the following statements made falsely and by word of mouth will be actionable without proof of special damage:—

- (a) of a judge that he has taken a bribe;
- (b) of a barrister that he knows no law;
- (c) of a schoolmaster that he has been divorced;
- (d) of a constable that he is a thief?

5. To what extent is a principal liable for torts committed by his agent?

An omnibus company issued an order to its drivers forbidding them to race with or obstruct other vehicles. In disobedience of the order, one of the drivers caused an accident by driving across the road in order to obstruct a rival omnibus. Is the company liable?

6. Write short notes on (a) contributory negligence, and (b) Act of State.

7. What must be proved to establish the liability of the owner of a dog for (i) biting a human being, (ii) killing a sheep?

Would proof that he kept the dog chained up and that, notwithstanding his reasonable care, the dog escaped and committed the mischief constitute a good defence to a suit for damage?

8. What is meant by 'a privileged occasion?' Under what circumstances are defamatory statements made on such occasions protected?

# Final Examination in Law

## January, 1932

### LAND TENURES

*Paper-Setters*—{ RAI BAHADUR HEMCHANDRA MITRA, B.L.  
MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.

*The figures in the margin indicate full marks*

#### FIRST HALF

*Examiners*—{ MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.  
,, SAYMADAS BHATTACHARYA, M.A., B.L.

1. Describe briefly the position of zemindars in Bengal before the Permanent Settlement of 1793, and the growth of their power under the British rule. 10

*Or,*

- Discuss briefly the merits and demerits of the Permanent Settlement of 1793. 10

2. Explain *any four* of the following expressions :— 10

(i) Chakran tenure, (ii) Ghatwali tenure, (iii) Malikana lands, (iv) Istemrari tenure, (v) Khudkast raiyat, (vi) Julkur, (vii) Abwab, (viii) Patwari.

*Or,*

- What claims to hold land free from the payment of revenue were recognised by the British Government, and what was the method of settlement in cases in which such claims were disallowed? 10

3. (a) Describe the prominent characteristics of Patni tenures, distinguishing them from those of other permanent Mokerari tenures. 10

(b) A, the owner of a zemindari, creates a tenure in favour of B, and subsequently grants a Patni tenure in favour of C. A puts C's Patni tenure to sale under the Patni Regulation. D purchases it. Is D entitled to annul B's tenure? Give reasons for your answer.

4. (a) On what grounds and under what conditions may a Civil Court set aside a sale for arrears of revenue under Act XI of 1859? 10

(b) A, the owner of a share of an estate, mortgaged the same to B. For the default of A in paying the revenue, the share was sold under Act XI of 1859, and was purchased by C. Can B recover the mortgage debt out of the property in the hands of C? Give reasons for your answer.

5. 'A right of fishery follows the river'. Explain with reference to the Privy Council case, *Srinath v Dinabandhu*, I.L.R. 42 Cal. 489. 10

Or,

- When a piece of land belonging to A is diluviated and afterwards re-appears in front of B's land as an accretion, who is entitled to claim it? Discuss with reference to the Privy Council case, *Lopez v. Muddon Mohan Thakur*, 13 M.I.A. 463. 10

## SECOND HALF

Examiners—{MR. NARAYANCHANDRA KAR, M.A., B.L.  
,, APURBACHARAN MUKHERJEE, M.A., B.L.

1. Name the different classes of tenants under the Bengal Tenancy Act, and explain the difference between 'Settled raiyat' and 'Occupancy raiyat.' 10

Or,

- State the grounds on which an *under raiyat* may be ejected by his landlord, and discuss whether his holding is heritable and transferable. 10

2. State the present law relating to the transferability of an occupancy holding, and compare it with the law under the previous Act and the High Court decision in *Chandrabinode v. Shaikh Ala Bux*, I.L.R. 48 Cal. 184. 10

Or,

- State the right of pre-emption conferred by the present Bengal Tenancy Act on the immediate landlord of an occupancy holding on its transfer by the occupancy raiyat, and briefly describe how that right may be exercised by him. 10

3. (a) Distinguish between a rent decree and a money decree, giving examples. 10

(b) A, a purchaser at a rent-sale, finds a trespasser B in possession of the land of the defaulting tenant. B has acquired a statutory title by twelve years' possession of the land. Can A eject B? Give reasons for your answer.

4. (a) 'No right of easement can consist in a right to an act or acts to be performed by the *servient* owner.' Explain by illustration. 5

- (b) Enumerate the different modes in which easements may come into existence, and illustrate how an easement is extinguished by 'Unity of title' 5

Or,

How is a right of way of watercourse acquired under Section 26 of the Indian Limitation Act? Is this the only mode of acquiring such easements? Discuss.

5. Briefly state what was laid down in *Paul v. Robson*, L.R. 42 I.A. 180, as to the law relating to ancient lights. 10

## EQUITY

*Paper-Setters*— { DR. S. K. GUPTA, M.A., B.L., B.LITT., PH.D.,  
BARRISTER-AT-LAW.  
MR. ATULCHANDRA GUPTA, M.A., B.L.

*The questions are of equal value*

*Answer not more than FIVE questions in EACH half*

*Give the answers in your own words, and reasons for your answers, as far as practicable*

## FIRST HALF

*Examiners*— { MR. P. MITTER, BARRISTER-AT-LAW.  
,, NIRAJNATH GHATAK, M.A., B.L.,  
BARRISTER-AT-LAW.

1. Notice the important changes introduced by the Judicature Acts of 1873 and 1875.

2. What trusts would you describe as 'trusts for charitable purposes'? How far, if at all, are such trusts affected by the rule against perpetuities?

3. What formalities, if any, are necessary for (i) the creation of a trust *inter vivos*, (ii) legal assignment of a debt?

4. Distinguish between an executory trust. What is the importance of this distinction? Give examples.

5. What are the rules relating to investment of trust funds on 'real securities'?

6. A and B are trustees for an infant. B allows A to have the sole custody of the moveables comprised in the trust who, unknown to B, pledges some of them to C. Advise B and C as to their respective position.

7. When, if at all, are the Statutes of Limitation a bar to an action by a cestui que trust against (i) the trustee for breach of trust, (ii) the purchaser of trust property with notice of the trust? What, if any, is the period of limitation in each case?

## SECOND HALF

*Examiners*— { MR. RAMAPRASAD MOOKERJEE, M.A., B.L.  
,, AMIN AHMED CHAUDHURI, M.A., LL.B.,  
BARRISTER-AT-LAW.

1. Explain: (i) vesting declaration, (ii) devestavit, (iii) equitable assets, (iv) covenants running with the land.

2. 'Corporeal chattels are outside the realm of constructive notice.' Discuss.

3. In what order should the assets of a deceased person be applied to the satisfaction of his debts?

4. A owes B £200 which is a portion debt; he also owes C £100. Thereafter A makes a will, giving to B £100 and to C £50 together with his residuary estate which is worth £150. Thereafter A takes £50 from B and £25 from C, and dies without having paid any of the debts of B or C. What sums are payable to B and C respectively?

5. Explain and illustrate the maxim 'redeem up, foreclose down.'

6. What special defences can be taken in an action for specific performance of a contract?

7. How far, if at all, will the Court grant an injunction against the publication of a libel (i) before, (ii) at the trial? What is meant by an 'undertaking in damages'?

## EVIDENCE, CIVIL PROCEDURE AND LIMITATION

*Paper-Setters*—{ SIR DEVAPRASAD SARVADHIKARY,  
KT., C.I.E., B.L., LL.D.  
MR. M. N. RAY, M.A., B.L.

*The questions are of equal value*

*Only FIVE questions to be attempted in EACH half*

## FIRST HALF

*Examiners*—{ MR. MANMATHANATH RAY, M.A., B.L.  
,, J. BAROOAH, BARRISTER-AT-LAW.

1. What do you understand by a 'Fact'? What is a 'fact in issue'? Illustrate your answer by an example.

Write a short note on 'Relevant Facts.'

2. Under what circumstances are 'Leading Questions' permissible? Discuss the reasons of such questions not being permissible under other circumstances.

3. Discuss the admissibility in Evidence of 'Admissions' with illustrations.

4. To what extent and under what circumstances are 'Judgments' of Courts of Law admissible in Evidence? Give reasons.

5. On what principles is the period of limitation extended under the provisions of the Indian Limitation Act? Give examples.

6. Discuss the admissibility in evidence of the following :—

(a) an assertion in a Kobala executed by a tenant in favour of his transferee that his right in it was a permanent one;

(b) a statement made by the superior landlord in a plaint filed by him in a rent suit.

7. The predecessor-in-interest of the plaintiffs granted lease for a term of 20 years to the predecessor of the defendants, on receipt of a certain amount of premium. The lease expressly provided that the grantee would have the status of a raiyat. The heirs of the grantee remained in possession after the death of their predecessor which took place some time after the expiry of the lease. The plaintiffs instituted a suit on the ground that they were themselves raiyats and the defendants under raiyats and the holding of the defendants was determined. Discuss whether the doctrine of estoppel applied to the case.

## SECOND HALF

*Examiners*—{ MR. RATANMOHAN CHATTERJEE, M.A., B.L.  
,, SUDHINDRANATH MUKHERJEE, M.A., B.L.

1. Outline, briefly, the object, scope, and scheme of the Code of Civil Procedure.

2. Define (a) jurisdiction, (b) cause of action, (c) decree, and (d) order.

3. State the essential points to be contained in a plaint.

4. What do you understand by (a) Injunction and (b) Receiver? State when and under what circumstances an injunction may be used and a Receiver may be appointed,

5. Enumerate the properties that are exempted from attachment in execution of a decree or order, and indicate the reasons for such exemption.

6. The High Court in a second appeal in 1923 had decided upon the validity of a wakfnama. In 1924, in a subsequent suit between the same parties brought in the Court of the Munsif, the title of the defendants under the wakfnama was in issue, as it was in the former litigation, though the subject-matter of the second suit was entirely different from the subject-matter of the first. Discuss whether the decision of 1923 on the question of the validity of the wakfnama operated as *res judicata* under Section 11 of the Code of Civil Procedure.

7. A money decree of 1913 was adjusted in 1922 by a compromise between the parties by which it was made payable by three annual instalments due in October, 1923, 1924, and 1925, and it was provided that in the event of the default of any instalment, the whole amount would be realisable by execution. Default having been made in the payment of the first instalment, the decree-holder filed an application for execution for the whole amount then due within three years of the due date but beyond 12 years of the original decree of 1913. Discuss whether Section 48 of the Code of Civil Procedure will bar the application.

## CRIMINAL LAW

Paper-Settlers—	{	THE HON'BLE MR. JUSTICE MANMATHANATH MUKHERJEE, M.A., B.L. MR. A. N. CHAUDHURI, M.A., BARRISTER-AT-LAW.
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*The questions are of equal value*

### FIRST HALF

*The figures in the margin indicate full marks*

Examiners—{ MR. CHANDRABHUSAN BANERJEE, B.L.  
 ,, MANINDRANATH BANERJEE, B.L.

1. To what extent are the following circumstances a good defence in a criminal action? Illustrate your answers by examples :— 10

(a) Intoxication, (b) Infancy, (c) Provocation, (d) Consent.

Or,

Discuss the extent and limitations of the right of private defence of property.

2. Take any three of the following cases and state what offence, if any, A is *prima facie* guilty of. Give reasons :— 10

- (a) A sells a horse to B, representing that it is sound whereas he knows that it is not.
- (b) A does not intend to kill B but in anger lifts up a heavy club and hits B on the head and kills him.
- (c) A, by instigation, causes Z, a person under 18 years of age, to commit suicide.
- (d) A voluntarily burns a 100 rupee note belonging to Z.
- (e) A picks up a cheque on a Banker signed by B payable to bearer, but without any sum having been inserted in the cheque, and fraudulently fills up the cheque by inserting the sum of Rs. 10,000.
- (f) A removes B's box from the custody of B's servant.

## 3. Define Criminal Conspiracy.

If A, B, and C combine together (a) to prevent a clerk employed in the High Court from attending his office, (b) and actually persuade him not to attend, what offence, if any, have A, B, and C committed?

Or,

Write a short commentary on the law relating to Defamation.

Or,

Distinguish between the offences in *any two* of the following groups :—

(a) Theft and Criminal Misappropriation ; (b) Extortion and Cheating ; (c) Affray, Unlawful Assembly, and Rioting ; (d) Hurt and Criminal Force.

4. What is meant by *Mens rea* in English Criminal Law? Indicate the principles deducible from *either* of the following cases :—

The case of William Dove ; the case of William Palmer.

5. Discuss briefly the principles explained in *either* of the following cases :—

*Barindra Kumar v. K.E.*, I.L.R. 37 Cal. 467 ; *Barendra Kumar v. K.E.*, 52 I.A. 191.

## SECOND HALF

Examiners—{ Mr. NURUL HUQ CHAUDHURI, M.A., B.L.  
,, S. P. RAY, BARRISTER-AT-LAW.

1. What is the procedure which enables a Magistrate to separate unfounded from substantial cases at the outset and to prevent innocent persons from being brought before the Court and subjected to the annoyance of frivolous charges? If a person is harassed in this way, how can the Magistrate deal with the party responsible for it?

Or,

When can a Police Officer arrest a person without an order from a Magistrate and without a warrant? Does the code make any distinction between Police Officers of different ranks in this respect? If so, what?

2. When there is a dispute about 'land or water' that is likely to cause a breach of the peace—

(a) What classes of Magistrates can take action?

(b) On what materials can action be taken?

(c) What order may be passed to avoid an imminent breach of the peace?

(d) What is the question that has to be inquired into, and what is the evidence that has to be taken?

(e) What is the order that has to be passed?

(f) What is the effect of such order?

What does the expression 'land or water' include?

3. What are the points of difference between the procedure in a summons case and that in a warrant case?

Describe briefly a trial with the aid of a Jury in a Court of Sessions. What is the procedure if a Judge at such a trial disagrees with the verdict of the Jury?



4. Distinguish between the dismissal of a complaint, the discharge of an accused person, and the acquittal of an accused person. What remedies, if any, are open to an aggrieved party in each of these cases? 10

Or,

Write a short note on the transfer of criminal cases by the High Court, the Sessions Judge, and the District Magistrate.

A criminal case is to be tried at Lahore, but it is desired to transfer it to Calcutta for trial. For what reason and by whom can it be so transferred?

5. Describe briefly the course of a criminal trial in England. Is there any appeal in criminal cases in England? 10

July, 1932

### LAND TENURES

*Paper-Setters*— { RAI BAHADUR HEMCHANDRA MITRA, B.L.  
MR. SITARAM BANERJEE, M.A., B.L.

*The questions are of equal value*

#### FIRST HALF

*Examiners*— { MR. BIRAJMOHAN MAJUMDAR, M.A., B.L.  
,, NARAYANCHANDRA KAR, B.L.  
,, PRAPHULLACHANDRA CHAKRABARTI, M.A., B.L.

*Answer ANY FIVE of the following*

1. As between the Zemindar and Patnidar, who, do you think, is entitled to sub-soil minerals? Do you think the Crown has any rights to the same? Discuss the question with reference to leading cases.

2. What is a chowkidari chakran land? When resumed and settled with the Zemindar, is the Zemindar, in his turn, bound to settle it with the Patnidar? Is the Patnidar liable to pay additional rent for the same? Discuss the principles with reference to leading cases.

3. What are Lakheraj grants? Examine the provisions of Regulation XIX of 1793 relating to the validity of such grants.

4. Compare the respective rights of a purchaser of an entire estate at a revenue sale and of a purchaser of a share of an estate at such sale.

5. A co-sharer pays the whole revenue and saves an estate from sale. Does he acquire any charge or lien upon the estate? If so, what is the nature of the charge?

6. Distinguish between 'accretion' and 'reformation in situ,' and describe the rights of the contiguous owners in respect thereto.

7. (a) Has the Collector any jurisdiction to sell an estate when there is no arrear of revenue due? Discuss the question in all its bearings.

(b) Compare briefly the incidents of a Patni tenure and a Mourashi mokazari tenure.

8. State briefly what was decided in the Privy Council Appeal in *Srinath Roy v. Dinabandhu Sen* (I.L.R. 42 Calcutta, 469 : L.R. 41 I.A. 221).

## SECOND HALF

Examiners— { MR. ABINASCHANDRA GHOSH, M.A., B.L.  
 „ SANTOSHKUMAR PAL, B.L.  
 „ SURYYAKUMAR AICH, B.L.

*Answer ANY FIVE of the following*

1. 'Rent is a British creation.' Fully explain and discuss.
2. What are the different classes of tenants recognised by the Bengal Tenancy Act? How would you distinguish between a tenure-holder and a raiyat?
3. On what grounds and in what circumstances is an occupancy raiyat liable to be ejected from his holding? Illustrate your answer with examples.
4. Examine the question of transferability of occupancy right since the passing of the Bengal Tenancy Amendment Act of 1928.
5. 'Rent is a first charge on the land.' Discuss with reference to leading cases.
6. Write a short thesis on the 'presumption of fixity of rent' under the provisions of the Bengal Tenancy Act.
7. What is an Easement of necessity? Describe the various modes of acquisition of easements.
8. Discuss the principles decided in *Paul v. Robson* (L.R. 41 Indian Appeals 189; I.L.R. 42 Cal. 46. P.C.)

## EQUITY

Paper-Setters— { MR. A. K. RAY, M.A., B.L.,  
 „ D. N. MITTER, BARRISTER-AT-LAW.

*The figures in the margin indicate full marks*

## FIRST HALF

Examiner— { MR. RAMAPRASAD MOOKERJEE, M.A., B.L.  
 „ AMIN AHMED CHOWDHURY, M.A., LL.B.,  
 „ A. K. SARKAR, M.A., B.L.,  
 BARRISTER-AT-LAW.

*Only FIVE questions are to be attempted*

1. 'Equity has added to our legal system novel and fertile remedies.' 10  
 State and explain those remedies.
2. Explain any two of the following maxims :— 10
  - (a) Equity acts in personam.
  - (b) Delay defeats equity.
  - (c) Equity looks to the intent rather than to the form.
  - (d) Equity looks on that as done which ought to have been done.

3. What do you understand by 'resulting trust'? Explain why imperfect gift will not be construed as a declaration of trust. 10

4. Discuss :— 10

(a) The office of a trustee cannot be delegated.

(b) A trustee must not profit by trust.

5. Write short notes on :— 10

(a) The statute of uses.

(b) Doctrine of cypres.

6. State the facts and explain the principles involved in the case of— 10

(a) *Cooper v. Phibbs*, L.R. 2 H.L. 149.

Or,

(b) *In re Halletts' estate*, L.R. 13 Ch.D. 696.

## SECOND HALF

Examiners— { DR. SUSILKUMAR DATTA, M.A., B.L., PH.D.  
 „ SASANKAJIBAN RAY, M.A., D.L.  
 MR. BYOMKES BASU, M.A., B.L.

*Only FIVE questions are to be attempted*

1. 'Equity has not come to destroy the law but to fulfil it.' Explain and illustrate. 10

2. Explain any two of the following terms :— 10

(a) Constructive fraud, (b) Conversion, (c) Satisfaction, (d) Constructive notice.

3. What do you understand by 'clog on the equity of redemption'? Explain the difference between legal and equitable mortgages. 10

4. Write short notes on :— 10

(a) Doctrine of part performance.

(b) Doctrine of election.

5. Explain briefly the principle of (a) marshalling of assets, (b) tacking, by means of examples. 10

6. State the facts and explain the principles involved in the case of— 10

(a) *Tulk v. Moxhay* (11 Reav 571, Finch sel cas 777).

Or,

(b) *Ramkoomar Koondo v. MacQueen*, L.R.I.A. Sup. Vol. 40.

## EVIDENCE AND CIVIL PROCEDURE

*Paper-Setters*— { DR. SARATCHANDRA BYSACK, M.A., D.L.  
MR. M. N. RAY, M.A., B.L.

*The questions are of equal value*

*Only FIVE questions to be attempted in EACH half; But in the FIRST half, candidates are REQUIRED to answer either Question No. 6 or 7, or both*

## FIRST HALF

*Examiners*— { MR. MANMATHANATH RAY, M.A., B.L.  
,, RATANMOHAN CHATTERJEE, M.A., B.L.  
,, GOPALCHANDRA MUKHERJEE, M.A., B.L.

1. Illustrate the principle 'The best evidence must be given.'

Explain the difference as to the effect of evidence in civil and criminal proceedings.

2. State and discuss the principles regulating the burden of proof.

3. State the rules relating to the proof of admissions (i) against the person who makes them, and (ii) on behalf of the person who makes them.

When may a confession made by a person in the custody of a police-officer be proved against the person?

4. A deed is executed by A in favour of B. The question is whether the deed constitutes a mortgage or an out-and-out sale with a contract of repurchase. Discuss whether (i) oral evidence of intention, and (ii) oral evidence of acts and conduct of parties, are admissible for the purpose of deciding the question.

5. State the principle of Estoppel as laid down in the Indian Evidence Act, and discuss it with reference to a leading case. Is Section 115 of the Evidence Act exhaustive?

6. Explain the effect of the addition of a new plaintiff during the pendency of a suit, on the question of limitation for the suit.

A owns the surface of a field. B owns the subsoil. B digs coal thereout without causing any immediate apparent injury to the surface, but the surface subsequently subsides. When does the period of limitation for a suit by A against B begin to run?

7. Discuss the effect of minority in extending the period of limitation.

In a suit brought by A as the Shebait of an idol to recover possession of land, it is found that the dispossession, on which the cause of action was based; had taken place during the minority of A, and that the suit had been brought within three years of his attaining majority. Discuss whether the idol would be entitled to the benefit of S. 6 of the Limitation Act by reason of its suing through the Shebait.

## SECOND HALF

*Examiners*— { MR. ASUTOSH MUKHERJEE, M.A., B.L.  
,, MAHIMAMUKUL HAZRA, M.A., B.L.  
,, SARATCHANDRA MUKHERJEE, M.A., B.L.

1. State the definition of a 'Decree' as given in the Civil Procedure Code.

In a suit by A against B, an application is made by X to be added as a party to the suit on the ground that he is interested in the subject-matter of the suit. The application is rejected. Discuss if this decision of the Court is a decree.

2. *A* sues *B* for rent due for the year 1903. The defence is that the land is rent-free. An issue is raised as to whether the land is rent-free. The Court decides that the land is rent-free and *A*'s suit is dismissed.

Subsequently, *A* sues *B*, claiming rent for the year 1904. *B* again sets up the same defence, namely that the land is rent-free. Discuss, giving reasons, whether the suit for rent of 1904 is barred as *res judicata*.

3. *A* obtains a decree against *B*. In execution of the decree, certain immoveable property belonging to *B* is sold and purchased by *C*. *B* seeks to set aside the sale. Advise how *B* is to proceed. Will it make any difference if *B* seeks to set aside the decree as well?

4. State the provisions of the Civil Procedure Code for the rateable distribution of assets held by a Court.

5. What do you understand by a representative suit? State the special procedure laid down in the Civil Procedure Code for suits to enforce charitable or religious trusts.

6. Narrate the provisions in the Civil Procedure Code for the investigation of claims and objections to the attachment of property in execution of a decree.

7. An *ex parte* decree is obtained against *A*. Advise *A* how he is to proceed to set aside the decree, first on the ground of fraud, and secondly on the ground of non-service of summons, or inability to attend on the ground of illness.

## CRIMINAL LAW

*Paper-Setters*—{ THE HON'BLE MR. JUSTICE M. N. MUKHERJEE  
RAI BAHADUR NAGENDRANATH BANERJEE

*The questions are of equal value*

### FIRST HALF

*Examiners*—{ MR. SURESCHANDRA DAS, M.A., B.L.  
,, CHANDRABHUSHAN BANERJEE, B.L.  
,, LALITMOHAN SANYAL, M.A., B.L.

1. Write a short essay on the law in British India of—

(a) Sedition,

or,

(b) Criminal conspiracy.

2. Explain the difference between the offences of cheating and criminal breach of trust.

Or,

Distinguish between theft and extortion.

3. Discuss the criminal liability, if any, of *A* in any two of the following cases—

(a) *A* throws a piece of stone to drive away a cow damaging his crop; a little child suddenly runs in and is hurt by the stone.

(b) *A* instigates *B* to kill *C*; *B* accordingly fires a pistol at *C* but misses him.

(c) A issues a post-dated cheque in favour of B and obtains delivery of goods from B. The cheque is presented by B at the bank on due date, but is dishonoured.

(d) A and B, both aged 21, engage in a duelling with pistols. A kills B.

4. Discuss the principles of law laid down in the case of *Queen Empress v. Balgangadhar Tilak* (I.L.R., 22 Bomb., 112).

Or,

*Queen Empress v. Abbas Ali* (I.L.R., 25 Cal., 512).

5. What are the conditions of criminality according to the Law of England?

Or,

Point out the difference between 'Larceny' in English Law and 'Theft' in Indian Law.

## SECOND HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. NIRMALCHANDRA CHAKRABARTI, M.A., B.L.} \\ \text{,, MANINDRANATH BANERJEE (SR.), B.L.} \\ \text{,, MANI BANERJEE, M.A., BARRISTER-AT-LAW.} \end{array} \right.$

1. Describe briefly the steps to be taken under the English Criminal Law from the institution of a prosecution until the commencement of the trial.

Or,

Discuss briefly the principles deducible from the case of William Dove.

2. What sentences under the Criminal Procedure Code in India are not appealable?

Or,

In what respects is the Court of the Additional District Magistrate subordinate to that of the District Magistrate?

3. What procedure is open to a person against whom a conditional order is made under Section 133, Criminal Procedure Code?

Or,

State the venue of trial in case of an offence of kidnapping.

4. Is the presence of an accused essential in every case at the time of the delivery of judgment?

Or,

A Magistrate tries an offender summarily and issues a search-warrant under Section 98, Cr. P. Code. In neither case is he empowered by law to act as such. Are his proceedings void?

5. What are the respective duties of the Judge and the Jury in a sessions trial held with the aid of a Jury?

Or,

What is the procedure that the Sessions Judge in the districts should adopt in case he disagrees with the verdict of the Jury?

# M. D. Examination

## 1932

### MENTAL DISEASES

*Each question to be answered in a separate book*

1. Give an account of the various methods of psychiatric and neural examination of cases of mental disease as applied in clinical practice.
  2. Discuss the origin and evolution of alcoholism and its relation to insanity and crime.
  3. Discuss the etiology, the prodromal indications and mental symptom in dementia paralytica.
- 

### PATHOLOGY

*The questions are of equal value*

1. Describe in detail the phenomenon of agglutination and the differences in this reaction towards somatic and flagellar antigens. How can these reactions be utilised practically in the diagnosis of disease.
  2. Describe and contrast when possible the differences in the macroscopical and microscopical appearances of the lesions seen in the two Syndromes known as beri beri and Epidemic dropsy. How have these lesions been produced?
  3. Describe the morbid anatomy and histological changes in the different types of goitre. Discuss the causation of Thyrotoxicosis Exophthalmic and secondary toxic goitres from a Pathological point of view?
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### PRACTICAL PATHOLOGY AND BACTERIOLOGY

*Time allowed—3 hours*

1. A blood film is taken from a case of fever. Stain it with Leishman's stain. Describe what you find.
2. Stain the section of liver supplied by the Haematoxylin Method. Describe in detail the pathological appearances seen. Leave under the microscope for inspection the most characteristic part of the section.
3. Illustrate if possible by drawings and describe what ova or protozoa you have found in the stool supplied for examination. Name the methods you have employed for these tests.
4. A secondary culture obtained from the blood of a patient suffering from fever is supplied. Describe the steps you have taken and would take to identify the organism.

*Specimen and Viva Voce*

1. Three microscopical sections will be shown, describe them briefly.

*Time for each—5 minutes*

2. *Viva voce* examination—10 minutes.

*Each candidate will be away for 25 minutes.*

The first starts at one hour, the second at one hour and ten minutes, and the third one hour and twenty minutes.

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# M. O. Examination

## 1932

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### OBSTETRICS

#### FIRST PAPER

1. What conditions may necessitate the indication of premature labour? Mention the most suitable method for each and describe in detail the procedure you would adopt in the case of a slightly contracted pelvis.
  2. What are the commonest types of disability consequent on child-bearing? How may they be prevented.
  3. Give the symptoms and physical signs of excessive uterine retraction and its consequences to (a) the mother and (b) the Foetus.
- 

#### SECOND PAPER

Write an essay on "Version in Obstetrics."

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#### THIRD PAPER

(Anatomy, Physiology, Embryology and Pathology in relation to Obstetrics and Gynaecology).

1. Discuss the most recent views of the relationship between pituitary gland and normal menstruation.
  2. How is the returns kept in its normal position in the pelvis.
  3. What congenital anomalies of the female genital system may give rise to pathological states?
- 

#### FOURTH PAPER

#### GYNAECOLOGY

1. Describe in exact detail how you would deal with the complications that may occur during the removal of a large cervical fibroid.
  2. Give the pathology, causation, symptoms and treatment of adenomyoma of the uterus.
  3. Discuss the relative merit of radium, X-rays and operation for the treatment of cervical cancer.
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# D. P. H. Examination 1932

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## BACTERIOLOGY AND PARASITOLOGY

*Examiner*—C. C. BOSE, B.A., M.B.

*The questions are of equal value*

*Only FOUR questions are to be answered*

1. What do you mean by active and passive immunity? How would you immunise persons against rabies, plague, and tetanus?
  2. Describe the morphology and life cycle, in man, of the malignant tertian parasite.
  3. Write, briefly, on the life history of the mosquitoes and the part they play as carriers of disease.
  4. There has been an epidemic of dysentery in a jail. Given full laboratory facilities, what examinations would you do to establish a diagnosis?
  5. How would you examine, bacteriologically, a sample of deep-well water, sent to you for report, as to potability?
- 

## CHEMISTRY AND PHYSICS

*Examiner*—{ LT.-COL. A. D. STEWART, M.B., CH.B., F.R.C.S.E.,  
D.P.H., D.T.M. & H., I.M.S.

*The questions are of equal value*

*All questions are to be answered*

1. What is refraction of light? State the elementary laws associated with this phenomenon.

Give a brief description of how the principles of refraction are applied in the Refractometer commonly used for the examination of butter and ghi.

2. What proteins are contained in milk? Give the proportionate protein composition of cow's milk and human milk.

3. What is meant by the Albuminoid Ammonia figure in water? How is it determined? What is its particular value in the sanitary analysis of water, illustrating your answer by figures?

4. Under what circumstances and in what amounts may Carbon Dioxide of itself become an actual impurity in air? What methods could you adopt to estimate these amounts?
-

## HYGIENE AND SANITATION, INCLUDING SANITARY ENGINEERING

*Examiner*—{ SIR HASSAN SUHRAWARDY, KT., O.B.E., M.D.,  
F.R.C.S.I., D.P.H.

*The questions are of equal value*

*All the THREE questions are to be answered*

1. What are the different methods by which joints in a water carriage-system are made? How would you test the efficiency of these joints (a) in a newly constructed house, (b) in a very old house?

2. What are the principle occupations which cause pulmonary diseases?

Mention the ways in which harm is done to the pulmonary system, and what precautions may be taken to prevent the same?

3. What are back to back houses? Why are they considered unhealthy? Suggest methods of their improvement.

## EPIDEMIOLOGY AND INFECTIOUS DISEASES

*Examiner*—MR. R. P. KHAMBATA, M.R.C.S., L.R.C.P., D.P.H.

*The questions are of equal value*

*All THREE questions are to be answered*

1. What is the seasonal incidence of Malaria in Calcutta? What are the species of anopheline mosquitoes which are commonly met with in Calcutta, and where are they found breeding? What preventive measures are required, and at what period of the year should they be taken?

2. Describe, in detail, how you would proceed to investigate the prevalence of 'hook-worm disease' in a locality. Describe the parasite and its life-history and mode of transmission. What are the measures to be adopted against it?

3. What is the aetiology of Cerebro-spinal Meningitis? Several cases of this disease have recently occurred in Calcutta. How would you diagnose the disease, and what precautionary measures would you advise?

## SANITARY LAW, VITAL STATISTICS, AND PUBLIC HEALTH ADMINISTRATION

*Examiner*—{ MR. TARAKNATH MAJUMDAR, D.P.H., D.T.M.,  
L.M.S.

*The question are of equal value*

*All the THREE questions are to be answered*

1. What are the diseases the notification of which is required under the Infectious Diseases Notification Act of 1889? What diseases are notifiable under the Calcutta Municipal Act of 1923? What are the general provisions of the Public Health Act of 1875 and the Calcutta Municipal Act of 1923 against the spread of infection?

2. What is meant by 'statutory nuisance' under the Public Health Act of 1875? Mention in due order the steps that have to be taken under the 'Public Health Act' to obtain the abatement of a nuisance. Explain fully the powers of entry conferred under the statute upon a Medical Officer of Health or an Inspector of Nuisances.

3. What is meant by—

- (a) A crude death rate,
- (b) A standardised death rate,
- (c) Expectation of life,
- (d) Probable duration of life,
- (e) Mean age at death,
- (f) A quarterly death rate of 32 per mille?

The quarterly death rate for the quarter ending in 31st March, 1932, for a town with a population of 5,000 persons is 32 per mille. What was the total No. of deaths in the town in that quarter?

## PART II

### HYGIENE AND SANITATION, INCLUDING SANITARY ENGINEERING

Examiner—{ SIR HASSAN SUHRAWARDY, KT., O.B.E., M.D.,  
F.R.C.S.I., D.P.H.

*The questions are of equal value*

*All the THREE questions to be answered*

1. To what extent is malaria prevalent in the towns of India? What species of mosquito is specially related to town malaria in India?

What means, legal and otherwise, would you recommend and adopt for dealing with this type of malaria?

2. What is meant by subsoil drainage? To what purposes is this to be put in public health? Illustrate your answer by reference to particular diseases and particular localities.

3. What is meant by chlorination? How is it applied in the purification of water supplies of big towns?

How are obnoxious tastes due to chlorination dealt with by modern methods?

### EPIDEMIOLOGY AND INFECTIOUS DISEASES

Examiner—{ MR. R. B. KHAMBATA, M.R.C.S., L.R.C.P.,  
D.P.H.

*The questions are of equal value*

*All the THREE questions are to be answered*

1. What are the distinguishing features of 'Stegomyia' mosquito in its adult and larval stages? What diseases are carried by this species of mosquito? You are asked to make a 'Stegomyia Survey' of the city of Calcutta and to advise the Corporation for its mitigation and control. Draft out a brief report on your findings, and give a rough estimate of the scheme you recommend.

2. To what causes would you ascribe the frequent outbreaks of cholera in Calcutta? Discuss the problem in detail. What recommendations would you make for the prevention of these outbreaks?

3. What infectious diseases are notifiable under the Calcutta Municipal Act, 1923? State in a tabular form their :—

- (a) Mode of infection,
- (b) Period of incubation,
- (c) Duration of illness,
- (d) Duration of infectivity,
- (e) Preventive measures,
- (f) Quarantine period for contacts.

## SANITARY LAW, VITAL STATISTICS, AND PUBLIC HEALTH ADMINISTRATIONS

*Examiner*—LT.-COL. A. D. STEWART, M.B., CH.B., F.R.C.S.E.,  
D.P.H., D.T.M. & H., I.M.S.

*The questions are of equal value*

*All the questions are to be answered*

1. A town in India, with a population of 150,000 at the 1921 census, returned for the year 1930 the following registered figures :—

Deaths 4,867.

Births 3,124.

Deaths from Respiratory diseases	...	...	736
"    "    Dysentery and Diarrhoea	...	...	446
"    "    Fever	...	...	312
"    "    Plague	...	...	1
"    "    Cholera	...	...	295
"    "    Smallpox	...	...	54
"    "    Tuberculosis	...	...	420
"    "    Malaria	...	...	73
"    "    Kala-Azar	...	...	2
"    "    Enteric Fever	...	...	87

Deaths in infants under 1 year 542.

Tabulate the crude death rate, the crude birth rate, the infantile mortality, and the death rates from the various diseases per 1,000, calculated on the 1921 census population.

Write a short specimen report on the health of the town on data given.

State very briefly what other data you would consider necessary to give a more correct presentation of the health of the town.

Or,

Write short notes on the following :—

- (1) Mode, median, quartile.
- (2) The probable error is expressed as  $\frac{1}{6745}$  times the standard deviation. Why is this particular fraction used?
- (3) Coefficient of variation.
- (4) Coefficient of regression.
- (5) Correlation coefficient.

2. Mention the Acts which deal with the sanitary condition of a single dwelling-house (a) in England and Wales, (b) in Bengal. Tabulate briefly the nature of this legislation in both places as contained in these Acts.

3. What is meant by a local sanitary authority and a central health authority? Describe briefly the origin and development of local sanitary authorities in England.

What local sanitary authorities exist in India? Discuss these briefly from the point of view of (a) size, (b) duties, (c) legal powers, (d) relationship to local governments.

# Preliminary Scientific M. B. Examination

## April, 1932

### ORGANIC CHEMISTRY

Examiners— { Mr. BENIMADHAB CHAKRABARTI, L.M.S.  
Prof. JNANENDRANATH MUKHERJEE, D.Sc.  
(Lond.).  
Dr. SUDHAMAY GHOSH, D.Sc.  
Mr. P. C. RAY, M.A.  
LT.-COL. T. C. BOYD, I.M.S.  
Dr. M. QUDRAT-I-KHUDA, D.Sc.

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

#### FIRST HALF

1. How will you find out the empirical formula of an organic compound containing carbon, hydrogen, and oxygen? Describe the processes involved.
2. Classify the aliphatic hydrocarbons, giving their characteristic properties. Name some important commercial products of this family and mention their uses.
3. How do you distinguish between the primary, secondary, and tertiary groups of the following classes of compounds : (a) alcohols, (b) amines?
4. Describe the preparation, properties, and uses of the following substances : (a) acetylene, (b) glycerine, (c) dextrin, (d) naphthalene.

#### SECOND HALF

1. Explain the following terms with examples : (a) structural formula, (b) additive compounds, (c) condensation, (d) aromatic compounds.
2. How can you prepare a sample of urea from potassium cyanide? Explain the reactions involved. Briefly describe one method of estimating urea.
3. How would you prepare salicylic acid from benzene? Describe its properties, uses, and tests.
4. Describe the preparation and properties of nicotine.

## PHYSICS

Examiners— $\left\{ \begin{array}{l} \text{MR. TULSIDAS KAR, M.A.} \\ \text{,, NIBARANCHANDRA RAY, M.A.} \\ \text{PROF. D. M. BOSE, M.A., Ph.D.} \\ \text{,, GOPALCHANDRA BHATTACHARYYA, M.Sc.} \end{array} \right.$

*The questions are of equal value*

*Only THREE questions to be attempted in EACH half*

## FIRST HALF

1. Describe simple experiments to prove the existence of tension along the surface of a liquid.

Explain any accurate method for measuring the surface tension of a liquid, deducing the formula.

2. State the laws of osmotic pressure, and explain the terms semi-permeable membrane, isotonic and hypertonic solutions.

Calculate the osmotic pressure at  $30^{\circ}\text{C.}$  of a 5 per cent. solution of potassium chloride ( $M=75$ ) when the coefficient of dissociation is 75 per cent.

3. State the laws of vibration of a stretched string and explain how the laws can be verified.

4. Describe an experiment to find the boiling point of a liquid, explaining the precautions to be taken. How should the arrangement be modified for measuring the boiling point of a solution?

5. Give a neat sectional diagram of the human eye and explain the functions of the different parts. How is accommodation effected? Mention some of the defects of the normal eye.

## SECOND HALF

6. Define principal points and the focal point of a lens.

Explain any accurate method for finding the focal length of a thick convex lens, deducing the formula to be used in the experiment.

7. What is rotatory polarisation?

Describe a polarimeter and explain how the specific rotation of glucose can be found with it.

8. Define specific resistance. Explain any method for measuring the specific resistance of the material of a wire.

9. What do you understand by hydrogen ion concentration and pH of a solution?

Explain the electrometric method for finding the pH of a solution, assuming the standard formula.

10. Describe an arrangement for producing X-rays, giving a neat sketch and explaining the functions of its different parts.

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## BOTANY

Examiners— { DR. SAHAYRAM BOSE, M.A., PH.D.  
 MR. SAILESWAR MUKHERJEE, L.M.S.  
 „ SURENDRACHANDRA BANERJEE, M.A., B.Sc.  
 „ KALIPADA BISWAS, M.A.

*The figures in the margin indicate full marks*

*Only two questions are to be attempted from EACH half*

*Illustrate with sketches wherever necessary*

## FIRST HALF

1. Describe the structure of a *Maize* seed. Illustrate in detail with sketches. 50
2. Describe the different types of Phyllotaxis with examples. 50
3. What is inflorescence? Describe the inflorescence in *Cruciferae Labiatae*. 50

## SECOND HALF

1. Compare the vascular system of a *Pine* stem with that of a *Dicotyledonous* stem. 50
2. Describe the gametophytic stage of *Selaginella*. 50
3. What is transpiration? How does it affect the ascent of sap in a stem? 50

## ZOOLOGY

Examiners— { DR. EKENDRANATH GHOSH, D.Sc., M.D.  
 „ HIMADRIKUMAR MUKHERJEE.  
 „ TARAKNATH PODDAR, M.Sc., M.D.  
 „ BAINI PRASAD, D.Sc.

*The questions are of equal value*

*Only two questions are to be attempted in EACH part*

## FIRST PART

1. What is the importance of the study of Zoology to a medical student?
2. What is the nature of Living Matter?
3. What are the evidences for Organic Evolution?

## SECOND PART

1. Write a short account of the various methods of reproduction in Protozoa.
2. Describe the development and functions of Coelome.
3. Give a brief account of the life-history of *Obelia*.

## THIRD PART

1. Describe the *Excretory System* of *Pheretima*.
2. Make a drawing of the mouth-parts of the Cockroach, and label the component parts.
3. Write short notes on any *five* of the following :—
  - (a) Cyclops.
  - (b) Parthenogenesis.
  - (c) Glochidium.
  - (d) Ootocyst.
  - (e) Organ of Bojanus.
  - (f) Spermatheca.
  - (g) Clitellum.

## FOURTH PART

1. Describe the Venous System of the *Toad*.
2. Give a short account of the Urinogenital System of *Ruhu (Labeo)*.
3. Enumerate the Cranial Nerves of the Guinea-pig and add short notes on their distribution.

**November, 1932**

## INORGANIC CHEMISTRY

{ Mr. P. C. RAY, M.A.  
 { Dr. SUDHAMAY GHOSH, D.Sc.  
*Examiners—* { Mr. BENIMADHAB CHAKRABARTI, B.A., L.M.S.  
 { Dr. M. QUDRAT-I-KHURRA, D.Sc.  
 { „ P. NIYOGI, M.A., Ph.D.  
 { Mr. P. R. RAY, M.A.

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

## FIRST HALF

1. Explain and illustrate the following :—
  - (a) Catalysis, (b) Neutralization, (c) Oxidation and reduction, (d)  $P_H$ -value.
2. How is ozone prepared? Describe its properties and tests. How can you show that it is an allotropic modification of oxygen?
3. What are the chief sources of iodine? How is it obtained in a pure form? What are its properties and uses?



## 4. What is a normal solution?

To 40 c.c. of a solution of caustic soda, 25 c.c. of a deci-normal hydrochloric acid were added; the solution was still alkaline and required 50 c.c. of 0.15 N  $\text{H}_2\text{SO}_4$  to neutralize it completely. Calculate the strength of the alkali solution in terms of normality and also the number of grams of caustic soda per litre. ( $\text{Na}=23.0$ .)

## SECOND HALF

1. Describe the preparation, properties, and uses of the following :—  
(a) White arsenic, (b) Cuprous chloride, (c) Corrosive sublimate, (d) Potassium dichromate.

## 2. What happens when—

- (a) phosphorous is boiled with caustic soda,
- (b) zinc is treated with nitric acid,
- (c) sulphuretted hydrogen is passed through a solution of sulphurous acid.
- (d) chlorine is passed through milk of lime?

Give equations.

3. Name the principal sources of radium. Give an account of its important properties and uses.

## 4. Describe the action of heat on the following :—

(a) Boric acid, (b) Potassium chlorate, (c) Lead nitrate, (d) Phosphoric acid, (e) Ammonium nitrite.

Give equations.

## ORGANIC CHEMISTRY

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

## FIRST HALF

1. How is nitrogen detected in an organic substance? Describe, in detail, the method of estimating nitrogen by the Kjeldahl's process.

2. How do you obtain pure methyl alcohol on a large scale? What are the common impurities present in it, and how are they removed? What is obtained by its oxidation?

3. What is the sweetness of milk due to? How would you obtain this sweetening agent in quantity? What are its properties and uses?

4. How is uric acid prepared? Describe its important properties and tests.

## SECOND HALF

1. What is meant by optical isomerism? Give examples. Give a short account of the theory advanced to explain optical isomerism.

2. You are supplied with some cinchona bark. What will be your procedure to prepare a pure sample of quinine from it? State its properties and uses.

What other substances are obtainable from this bark?

3. How is phenol prepared from aniline? Describe its properties and uses. How is it commercially obtained?

4. How are the following substances prepared: (a) Salicylic acid, (b) Iodoform, (c) Benzaldehyde, (d) Antifebrin?

## PHYSICS

Examiners— $\left\{ \begin{array}{l} \text{MR. TULSIDAS KAR, M.A.} \\ \text{,, NIBARANCHANDRA RAY, M.A.} \\ \text{DR. M. M. RAY, D.Sc.} \\ \text{PROF. D. M. BOSE, M.A., Ph.D.} \end{array} \right.$

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

### FIRST HALF

1. Define density. Find an expression for the density of a mixture of two substances when their proportion by volume and densities are given.

Calculate the volume of water with which 100 c.c. of glycerine is to be diluted so that the mixture may have a density of 1.05, density of glycerine being 1.26 gm/cm<sup>3</sup>.

2. Define coefficient of viscosity.

Describe an experiment for comparing the coefficients of viscosity of two liquids, stating the formula and giving the precautions.

3. What do you understand by the pitch and the quality of a musical note? Describe an experiment for accurately finding the pitch of a tuning fork.

4. Define humidity and explain the theory of the dew-point hygrometer. Describe the method of finding the dew point with a Daniell hygrometer.

5. Define the magnifying power of a compound microscope. On what does it depend? Describe an experiment for practically finding the magnifying power.

### SECOND HALF

6. How can you practically distinguish between ordinary, partially polarised, and completely polarised light?

A pencil of plane polarised light is allowed to pass normally through a natural crystal of calcite. Explain what is observed when the crystal is rotated about the pencil as axis.

7. Define refractive index. Explain the theory and the method of finding the refractive index of a liquid by the microscope.

8. Describe a moving coil galvanometer and explain the adjustments. Deduce the formula connecting the current with the deflection.

9. What do you understand by migrations of ions and by ionic velocity? Describe how by an electrolytic experiment the ratio of the velocities of the anion and the cation can be determined.

10. Describe the medical battery and explain the action.

## BOTANY

Examiners—	{	Dr. SAHAYRAM BOSE, M.A., Ph.D.	
		Mr. SAILESWAR MOOKHERJEE, L.M.S.	
		„ SURENDRACHANDRA BANERJEE, M.A., B.Sc.,	F.L.S.
		„ KALIPADA BISWAS, M.A.	

*The figures in the margin indicate full marks .*

## FIRST PART

*Answer ANY TWO*

- |   |    |
|---|----|
| 1. How do you distinguish between a tuber and a swollen root? | 25 |
| 2. Describe the structure of a sorus of fern.                 | 25 |
| 3. Describe the main types of branching of stems.             | 25 |

## SECOND PART

- |  |    |
|--|----|
| 1. Describe the structure of a vascular bundle of a dicotyledonous stem. | 50 |
|--|----|

*Or,*

- |  |    |
|--|----|
| 2. Give an account of the modes of new cell-formation. | 50 |
|--|----|

## THIRD PART

- |   |    |
|---|----|
| 1. Give the characters of the natural order <i>Cucurbitaceæ</i> . | 50 |
|---|----|

*Or,*

- |  |    |
|--|----|
| 2. Describe the various types of dehiscent fruits. | 50 |
|--|----|

## FOURTH PART

- |   |    |
|---|----|
| 1. Define photosynthesis. What are the conditions necessary for it? | 50 |
|---|----|

*Or,*

- |  |    |
|--|----|
| 2. Describe the life-history of <i>Mucor</i> . | 50 |
|--|----|

## ZOOLOGY

Examiners— { DR. EKENDRANATH GHOSH, D.Sc., M.D.  
                  " HIMADRIKUMAR MOOKERJEE, M.Sc., D.Sc.  
                  " TARAKNATH PODDAR, M.Sc., M.B.  
                  " BAINI PRASAD, D.Sc.

*Give figures as far as possible*

*The questions are of equal value*

## FIRST PART

1. What are the essential characters and contents of an animal cell?
2. What are the various modes of asexual reproduction in animals?
3. Give an outline of Darwin's theory of Evolution.

## SECOND PART

1. Describe the life-history of *Vorticella*.
2. Describe the function and development of Cœlenteron.
3. Describe the structure of the body wall of *Hydra*.

## THIRD PART

1. What are the principal animal tissues? Describe *any two* of them.
2. What are the general characters of Annelida?
3. Write short notes on *any five* of the following :—
  - (a) Medusa.
  - (b) Ctenidium.
  - (c) Alternation of generation.
  - (d) Ommatidium.
  - (e) Zoea.
  - (f) Gizzard.
  - (g) Micronucleus.

## FOURTH PART

1. Describe the arterial system of the *Guinea pig*.
  2. Describe the male and female urino-genital organs of the *toad*.
  3. Enumerate the cranial nerves of *Ruhu (Labeu)*, and add short notes on their distribution.
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# First M. B. Examination

## April, 1932

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### ANATOMY

<i>Examiners—</i>	{	RAI NANILAL PAN, BAHADUR, M.B.
		MR. MANINDRANATH BOSE, M.B.C.M. (EDIN.).
		CAPTAIN HAZI DABIRUDDIN AHMED, K.T.H., L.M.S., B.M.S.
		DR. SATYASAKHA MAITRA.

### FIRST PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Describe the thoracic portion of the gangliated trunk of the sympathetic and state the distribution of its splanchnic branches. 60
2. What are chromaffin organs? Enumerate them and describe the development of any one of them. 65

#### SECOND HALF

1. Describe the renal pelvis and the course and relations of the ureter in the female. 65

*Or,*

- Describe the Prostate gland, noting its relations.
2. Describe the Auditory tube. How is it developed? 60

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### SECOND PAPER

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Describe the arterial anastomosis around the knee-joint. 60

*Or,*

- Describe the origin, course, and relations of the middle meningeal artery. Name its branches.
2. Name the external rotators of the thigh. Give their nerve supply and describe any one of them. 65

## SECOND HALF

1. Describe the Third Ventricle of the brain. 65
2. (a) Give the attachments of the cruciate ligaments of the knee-joint and state the uses of the ligaments.  
(b) Describe the Iliofemoral Ligament.

## PHYSIOLOGY

( PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.  
MR. MADANMOHAN DATTA, L.M.S.  
*Examiners—* } MR. SUNILCHANDRA BASU, M.R.C.P., M.B.,  
D.T.M.  
CAPT. PREMANKUR DE, M.B., B.Sc.

## FIRST PAPER

*The questions are of equal value*

## FIRST HALF

1. Describe the principal connections of the cerebellum and explain the modern view as regards the functions which the cerebellum performs in man.

*Or,*

Write short notes on :—

- (a) Decerebrate animal.
- (b) Thalamic animal.
- (c) Romberg's sign.
- (d) Axon reflex.
- (e) The Knee-Jerk.

2. Describe the structure and innervation of the iris. State the various conditions that alter the size of the pupil.

## SECOND HALF

1. Discuss the mechanism of the Pyloric sphincter and the Ileo-colic sphincter.

*Or,*

Describe the minute structure and functions of the colon.

2. Give an account of the purin metabolism.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

1. Describe briefly the mechanism of micturition. What are the effects of injury of the dorsal region of the spinal cord on this mechanism?
2. Describe minutely the structure of the Pituitary gland.

*Or,*

Describe briefly the effects of removal of the ovaries,—(a) before puberty, (b) after puberty

## SECOND HALF

1. Give an account of the factors concerned in the maintenance and regulation of respiration
2. Describe the origin, structure, and functions of the white blood corpuscles.

*Or,*

Describe the origin and mode of propagation of the cardiac impulse in man.

**November, 1932**

## ANATOMY

Examiners—	{	RAI NANILAL PAN, BAHADUR, M B
		CAPTAIN HAZI DABIRUDDIN AHMED, L M.S.,
		K.T.H., B.M.S.
		MR. M. N BOSE, M.B.C.M. (EDIN.).
		CAPT. DINESCHANDRA CHAKRABARTI, F R.C.S. (E).
		MR. PREMNIHAR RAY, M.B., F.R.C.S. (Eng.).
		RAI BAHADUR UPENDRANATH RAYCHAUDHURI.
		MR. LALITKUMAR GHOSH.

## FIRST PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

1. Describe the mucous sheaths of the tendons in front of the 65  
wrist joint.
2. Describe the Broad Ligament of the uterus. 65

SECOND HALF

1. Describe the subarachnoid cisternæ. 60
2. Describe the Palatine Tonsil, giving its blood supply and development. 65

Or,

Describe the vermiform process in detail and its development.

SECOND PAPER

*The figures in the margin indicate full marks*

FIRST HALF

1. Describe the course and distribution of the extra-cranial portion of the Facial Nerve. 60
2. Describe the course and relations of the Arteria Profunda Femoris and enumerate its branches. 65

Or,

Describe the arterial supply of the fifth Intercostal space.

SECOND HALF

1. Write short descriptions of :— 60
  - (a) Conus Elasticus.
  - (b) Peroneal Refinacula.
  - (c) Fossa Ovalis (Saphenous opening).
  - (d) Circulus Arteriosus (of Willis).
2. Describe the origin, insertion, action, and nerve supply of :— 65
  - (a) Psoas Major.
  - (b) Sternocleidomastoidens.
  - (c) Quadratus Plantæ.
  - (d) Pronator Teres.

PHYSIOLOGY

Examiners—	{	PROF. S. C. MAHALANOBIS, B.Sc., F.R.S.E.
		MR. M. M. DATTA, L.M.S.
		CAPT. PREMANKUR DE, M.B., B.Sc., M.R.C.P. (E).
		MR. S. K. SEN, B.Sc., M.B., L.M., D.T.M., D.P.H.
		„ PHANINDRANATH BRAHMACHARI, M.B.
		„ RUDRAKUMAR PAL, M.Sc., M.B.

FIRST PAPER

*The questions are of equal value*

*Answer only TWO questions in EACH half*

FIRST HALF

1. Give an account of vitamins and the effects of their deficiency.



2. What is cerebro-spinal fluid? Give its composition. How is it formed and absorbed? What functions do you attribute to it?

3. Describe how you would investigate the functions of the thyroid and explain its physiological importance.

### SECOND HALF

1. Describe briefly the mechanism of the secretion of the gastric juice.

2. Write short notes on :—

- (a) Refractory period of muscles.
- (b) Vagus escape.
- (c) Asphyxia.
- (d) Conditioned reflex.
- (e) Presbyopia.

3. What is a pulse? How is it produced? Draw a typical pulse-tracing and explain its features.

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### SECOND PAPER

*The questions are of equal value*

*Answer only TWO questions in EACH half*

### FIRST HALF

1. Give an account of the spinal reflexes in man.

2. Describe the origin, development, function, and fate of the erythrocytes.

3. Describe the mechanism of the maintenance of the acid-base balance of the blood.

### SECOND HALF

1. Describe the factors concerned in the filtration of fluid through the glomeruli of the kidney.

2. Describe the movements of the stomach after a full meal, with special reference to the control of the pyloric sphincter.

3. Describe the histology of :—

- (a) Liver.
  - (b) Kidney.
-

## Second M. B. Examination

### April, 1932

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#### PHARMACOLOGY AND MATERIA MEDICA

(Including Pharmacological Chemistry and Pharmacy)

Examiners— $\left\{ \begin{array}{l} \text{LT.-COL. R. N. CHOPRA, M.A., M.D., I.M.S.} \\ \text{DR. PRAMATHANATH NANDI, M.D.} \\ \text{DR. HARIHAR GANGULI, M.D.} \\ \text{MR. BIRENDRANATH GHOSH, L.M.S.} \end{array} \right.$

*Only two questions in EACH half are to be answered  
The questions are of equal value*

#### FIRST HALF

1. Describe the action of Calcium, Barium, and Magnesium ions on the muscle tissue.
2. Write short notes on (1) Insulin, (2) Parathyroid, (3) Codliver oil, and (4) Glucose.
3. Classify Diuretics and discuss their therapeutic uses.

#### SECOND HALF

4. Describe the pharmacological action of Atropine on the circulatory and respiratory systems.
5. Compare the action of (1) Paraldehyde and Opium on the nervous system, (2) Cocaine and Adrenalin on the pupil, and (3) Hydrag. Subchlorido and Magnesium Sulphate on the intestine.
6. What are Antiseptics and Disinfectants? Discuss their uses.

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#### ELEMENTARY BACTERIOLOGY AND PATHOLOGY

Examiners— $\left\{ \begin{array}{l} \text{MR. CHARUCHANDRA BOSE, B.A., M.B.} \\ \text{DR. JOGESCHANDRA MUKHERJEE.} \\ \text{,, JITENDRANATH MAITRA, M.D.} \\ \text{MR. M. N. DE, M.B., M.R.C.P.} \end{array} \right.$

*The questions are of equal value*

*Answers to be illustrated with diagrams where necessary  
Candidates should give their answers in their own words  
as far as practicable*

#### FIRST HALF

1. Describe briefly the process of repair of tissues after injury.

2. Describe the distinctive characters of the common Cestodes that infect the human subject, with brief notes on their life cycle.

*Or,*

A case of continued fever of a week's duration has been admitted to the hospital. How would you determine the nature of infection by laboratory methods?

### SECOND HALF

3. Explain what you mean by the term Infection. How does the body react to an infection with Diphtheria Bacillus?

4. Write on the Carcinomas, stating their distinctive microscopical characters and secondary changes that may take place in them.

*Or,*

Mention the common protozoal parasites that are found in the alimentary tracts of man. Describe the morphology and pathogenesis of the most important of them.

## November, 1932

### PHARMACOLOGY AND MATERIA MEDICA

Examiners— $\left\{ \begin{array}{l} \text{DR. PRAMATHANATH NANDI, M.D.} \\ \text{LT.-COL. R. N. CHOPRA, I.M.S., M.A., M.D.} \\ \text{MR. BIRENDRANATH GHOSH, L.M.S.} \\ \text{,, SUNILCHANDRA BASU, M.B., M.R.C.P.,} \\ \text{D.T.M.} \end{array} \right.$

*The questions are of equal value*

*Only two questions in each half to be answered*

### FIRST HALF

1. Write short notes on idiosyncrasy, ionic medication, colloidal metals, synergism, and antagonism.

2. Write short notes on the therapeutic uses of (a) Anti-tetanic serum, (b) Strophanthin, (c) Emetine, (d) Glucose, (e) Parathyroid.

3. Describe the action and uses of antimony.

### SECOND HALF

4. Enumerate the drugs that depress the sensory nerve endings, and describe fully the action of one of them on the nervous system.

5. Classify the drugs that act on the respiratory system, and describe how bronchial antispasmodics act.

6. What are the active principles of Pituitary gland? Discuss their effects on circulation, growth and genito-urinary system.

## ELEMENTARY BACTERIOLOGY AND PATHOLOGY

Mr. CHARUCHANDRA BOSE, B.A., M.B.  
Examiners— { „ A. C. UKIL, M.B.  
DR. JITENDRANATH MAITRA, M.D.  
Mr. M. N. DE, M.B., M.R.C.P.

*The questions are of equal value*

*Illustrate your answers with diagrams*

## FIRST HALF

1. Describe the varieties, causes, and results of Thrombosis.
2. Describe the microscopic appearances of the commoner varieties of Sarcoma.

*Or,*

Describe the pathology of gas gangrene. Enumerate the more important of the causative organisms.

## SECOND HALF

3. Describe the naked-eye appearances of the intestines in Bacillary dysentery. How would you isolate the causative organisms from the faeces in such a case?
4. Describe the parasite of Kala-azar. Describe the laboratory procedures you would adopt to diagnose a suspected case of Kala-azar.

*Or,*

Write short notes on :—

- (i) Bacteriophage.
  - (ii) Complement-fixation.
  - (iii) Rodent Ulcer.
  - (iv) Tinea Echinococcus.
-

# Third M. B. Examination

## April, 1932

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### FORENSIC MEDICINE

Examiners— $\left\{ \begin{array}{l} \text{MAJOR B. C. MALLYA, F.R.C.S.E.} \\ \text{MR. ATINDRANATH SEN, M.B.} \\ \text{,, HIRALAL SINGH, L.M.S.} \\ \text{LT.-COL. K. S. THAKUR, I.M.S.} \end{array} \right.$

*The figures in the margin indicate full marks*

#### FIRST HALF

1. Describe the phenomena of Rigor Mortis. What is its medico-legal significance? 125
2. Describe the post-mortem appearances in a case of death due to Hanging. What circumstances would lead you to suspect homicide? 125

*Or,*

What are the signs, symptoms, and treatment of poisoning by Aconite? Give the average fatal dose and fatal period. Describe the post-mortem appearances in a case of death by Aconite poisoning.

#### SECOND HALF

3. What is Rape? How would you proceed to examine a case of Rape brought to you by the Police within 24 hours after the occurrence? Describe the signs in a case of a minor girl and in an adult married woman. 125
4. What is the medico-legal importance of Age, and how would you determine it in the living? 125

*Or,*

How would you distinguish between a 'bruise' and post-mortem 'sugillation'? Describe the medico-legal significance of both of these conditions. How are bruises simulated, and how would you distinguish a real bruise from an artificial one?

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*Examiners—* { LT.-COL. A. D. STEWART, M.B., Ch.B.,  
F.R.C.S.E., D.P.H., D.T.M. & H., I.M.S.  
MR. TARAKNATH MAJUMDAR, L.M.S., D.P.H.,  
F.C.S., D.T.M.  
SIR H. SUHRAWARDY, Kt., O.B.E., F.R.C.S.I.,  
M.D., D.P.H.  
MR. R. B. KHAMBATA, D.P.H.

6. What is meant by 'open' and 'closed' Tuberculosis? You are attending a case of 'open' Tuberculosis of the Lungs in a house. Describe the precautions you would advise to be taken in order to lessen the chances of spread of the disease to other members of the household.

# November, 1932

## FORENSIC MEDICINE

Examiners— { LT.-COL. K. S. THAKUR, I.M.S.  
MR. A. N. SEN, M.B.  
CAPT. DABIRUDDIN AHMAD, L.M.S., O.B.E.,  
A.I.R.O.  
MAJOR S. N. MUKHERJEE, I.M.S.

*The figures in the margin indicate full marks*

### FIRST HALF

1. Mention the different kinds of wounds. State how they are caused and how you would differentiate them. 125

*Or,*

Describe the different kinds of Gunshot wounds. How are they caused, and how would you distinguish whether a wound is accidental, suicidal, or homicidal?

2. What is Nitric Acid commercially used for? Describe the injuries commonly met with and caused by strong Nitric Acid. How would you treat such cases? 125

### SECOND HALF

3. Describe the changes that occur in a body after death in a chronological order. 125

4. Describe the recent signs of delivery as met with in a post-mortem room. In what connection is this information of importance? 125

*Or,*

What are the preliminaries for performing a post-mortem examination? Describe fully the procedure of examination of abdomen.

## HYGIENE AND PUBLIC HEALTH

Examiners— { LT.-COL. A. D. STEWART, I.M.S.  
 MR. TARAKNATH MAJUMDAR, L.M.S., D.P.H.,  
 F.C.S., D.T.M.  
 ,, R. B. KHAMBATA, D.P.H.  
 SIR H. SUHRAWARDY, KT., O.B.E., F.R.C.S.I.,  
 M.D., D.P.H.

*The questions are of equal value*

*Only TWO questions are to be answered from EACH half*

## FIRST HALF

1. Describe fully the phenomena of primary vaccination. When would you call such vaccination successful? What is the nature of the immunity that is produced? What is the effect of such immunity on a re-vaccination?

2. What is the essential difference between the action of a slow sand filter and a mechanical filter? Contrast briefly the advantages and disadvantages of these two systems.

3. Describe the duties from a preventive form of view of a medical practitioner in attendance on a case of—

- (a) Malaria,
- (b) Enteric Fever,
- (c) Diphtheria.

## SECOND HALF

4. What diseases have been definitely proved to be carried to man by milk? Describe the considerations and investigations that would lead you to conclude that an epidemic in a town has been caused by milk.

5. Describe the deficiencies and defects ordinarily found in a conservancy system in a Bengal town. Discuss how, in your opinion, these could be remedied.

6. What is meant by ' Splenic Index ' in Malaria? How is it taken and expressed? How does the Splenic Index vary in different conditions of malarial intensity?

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# **Final M. B. Examination**

## **April, 1932**

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### **MEDICINE**

*Examiners—* { DR. B. C. ROY, B.A., M.D., F.R.C.S.,  
M.R.C.P.  
RAI BAHADUR DR. UPENDRANATH BRAHMACHARI,  
M.A., M.D., Ph.D., F.A.S.B.  
MAJOR J. C. DE, I.M.S.  
LT.-COL. E. H. V. HODGE, I.M.S.  
DR. S. P. BHATTACHARYYA, M.D.  
MR. A. R. MAJUMDAR, M.B.

### **FIRST PAPER**

#### **FIRST HALF**

1. Describe the causes, signs, symptoms, and treatment of auricular fibrillation.
2. Give three important complications of typhoid fever. Describe their signs, symptoms, and treatment.

*Or,*

Give the differential diagnosis of vomiting of infancy.

#### **SECOND HALF**

3. Describe the etiology, signs, symptoms, and complications of emphysema of the lungs.

### **SECOND PAPER**

#### **FIRST HALF**

1. Describe the signs, symptoms, and sequelæ of epidemic dropsy.
2. Describe the signs, symptoms, and complications of acute nephritis. Indicate the lines of treatment of the disease.

*Or,*

Give three important complications of diabetes mellitus other than surgical. Describe their signs, symptoms, and differential diagnosis.

## SECOND HALF

8. Discuss the aetiology and pathology of acute anterior poliomyelitis. Discuss the differential diagnosis of paralysis met with in this disease from other forms of paralysis met with in children.

## SURGERY

Examiners—	{	LT.-COL. A. H. PROCTOR, D.Sc., M.D.,	F.R.C.S.E., I.M.S.
		DR. MRIGENDRALAL MITRA, L.M.S., M.D.,	F.R.C.S.
		„ LALITMOHAN BANERJEE, M.S.,	F.R.C.S.
		„ S. K. MUKHERJEE, L.M.S.,	F.R.C.S.,
			D.O., D.O.M.S.
		LT.-COL. E. O. G. KIRWAN, M.B.,	F.R.C.S.,
			I.M.S.
		CAPT. DINESCHANDRA CHAKRABARTI, F.R.C.S.E.	

## FIRST PAPER

*The questions are of equal value*

*Either Question 4 or 5 only to be attempted*

## FIRST HALF

1. Give the causes, symptoms, and treatment of empyæma of the maxillary antrum. Describe a method of exploring the antral cavity.
2. A boy, aged 12, is brought to you complaining of inability to extend the right thigh. How will you proceed to investigate the case?

## SECOND HALF

3. What are the surgical conditions affecting the œsophagus which cause difficulty in swallowing? Describe the methods you would adopt to diagnose the cause in a case of this kind.
4. Describe the signs and symptoms of fracture of the humerus in its middle third. What complications might arise due to the injury or in the course of treatment?

*Or,*

5. Describe the affections of bone due to acquired syphilis. Give their differential diagnosis. Give, in detail, the course of treatment for acquired syphilis. How would you decide when to cease treatment?

## SECOND PAPER

*The questions are of equal value*

*Either Question 4 or 5 only to be attempted*

1. How would you diagnose a case of penetrating injury of the eyeball? What are its complications, immediate and late? Describe briefly your line of treatment.
2. Describe briefly the prostate gland. What pathological conditions are met with in it? Mention briefly in sequence the symptoms that may arise due to their presence.
3. How would you diagnose and treat a case of Melæna?
4. Discuss the differential diagnosis of the common forms of ulcers of the tongue.

*Or,*

5. Describe the ætiology and pathology of the different varieties of Gangrene.

## MIDWIFERY AND DISEASES OF WOMEN

Examiners—	{	DR. KEDARNATH DAS, C.I.E., M.D.	
		LT.-COL. V. B. GREEN-ARMYTAGE, M.D.,	
		F.R.C.P., I.M.S.	
		DR. BAMANDAS MUKHERJEE, L.M.S.	
		„ JATINDRAMOHAN DAS, L.M.S.	
		„ SATINATH BAGCHI, M.Sc., M.B., M.O.	
		„ NARENDRANATH BASU, L.M.S.	

## FIRST PAPER

*The figures in the margin indicate full marks*

1. Describe the relations of the female bladder. In what way may its functions be interfered with by pregnancy, labor, and the puerperium? 65
2. Discuss the uses and abuses of extract of posterior lobe of the Pituitary in pregnancy and in labor. 60
3. Describe the pathology of Cancer of the Cervix. Discuss the lines of treatment. 65
4. Enumerate the causes of the 'acute abdomen' in a woman aged 25, and give briefly the differential diagnosis. 60

SECOND PAPER

*The figures in the margin indicate full marks*

FIRST HALF

1. How would you treat a patient who is having eclamptic fits? 65
2. How would you manage a case of twin labor after the birth of the first child? 60

SECOND HALF

3. Describe the operation of abdominal pan-hysterectomy. 65
4. What are the causes of infantile vomiting and how would you treat such vomiting? 60

*Or,*

What is icterus neonatorum and how would you treat such a case?

**November, 1932**

MEDICINE

Examiners— { RAI BAHADUR DR. UPENDRANATH BRAHMACHARI,  
M.A. M.D., Ph.D., F.A.S.B.  
DR. HARIHAR GANGULI, M.D.  
MAJOR J. C. DE, I.M.S.  
LT.-COL. J. D. SANDES, M.D., F.R.C.P.I.,  
I.M.S.  
DR. BIDHANCHANDRA ROY, B.A., M.D.,  
F.R.C.S., M.R.C.P.  
,, S. P. BHATTACHARYYA, M.D.

FIRST PAPER

*The questions are of equal value*

FIRST HALF

1. Describe briefly the symptoms, signs, and treatment of Cerebral Syphilis.
2. Discuss the use of Sera in the prevention and cure of the following diseases :—
  - (a) Diphtheria.
  - (b) Tetanus.
  - (c) Cerebro-spinal meningitis.

What undesirable effects may follow their use, and how can they be prevented?

## FINAL M.B. EXAMINATION

## SECOND HALF

1. Describe how you would proceed to investigate a case of hæmaturia with a view to arrive at a correct diagnosis of the case.

Or,

2. Give the symptoms, signs, and treatment of Ankylostomiasis.

## SECOND PAPER

*The questions are of equal value*

## FIRST HALF

1. Discuss the significance of a bruit in the aortic area and also of changes in the character of the bruit met with in Mitral Stenosis.

2. Describe the pathology of Pyopneumothorax. Give its physical signs and treatment.

## SECOND HALF

1. Discuss the etiology of Pernicious Anaemia. Give the diagnostic and prognostic values of the blood picture in this disease.

Or,

2. What is Jaundice? Give its classification. Discuss the pathogenesis of the different varieties.

## SURGERY

<i>Examiners—</i>	{	LT.-COL. W. L. HARNETT, M.A., M.D.,
		F.R.C.S., I.M.S.
		DR. MRIGENDRALAL MITRA, L.M.S., F.R.C.S.,
		M.D. (Brux.).
		MR. LALITMOHAN BANERJEE, M.S., F.R.C.S.
		DR. S. K. MUKHERJEE, L.M.S., F.R.C.S., D.O.,
		D.O.M.S.
		MR. SUBODHCHANDRA DATTA, M.B., F.R.C.S.
		LT.-COL. E. O. G. KIRWAN.

## FIRST PAPER

*The questions are of equal value*

*Either Question 4 or 5 only to be attempted*

## FIRST HALF

1. What do you understand by (a) primary shock, (b) delayed shock, (c) collapse?

Give the modern views of the causation of these conditions.

What steps would you take to prevent the onset of shock during operation? How would you treat the condition when established?

2. What is Volkmann's contracture? Give the modern views of its causation. Describe its clinical signs and discuss its prevention and treatment.

### SECOND HALF

3. Describe a case of ascending Pyelonephritis. Give its causes, pathology, and treatment.

4. What is Pelvi-rectal abscess? Give its causes, anatomical relations, and treatment.

Or,

5. Enumerate the surgical complications that may be met with in connection with filariasis.

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### SECOND PAPER

*The questions are of equal value*

*Either Question 4 or 5 only to be attempted*

### FIRST HALF

1. What are the complications and sequelæ of a neglected case of Trachoma? Write short notes on the appropriate treatment of each condition.

2. What is secondary hæmorrhage and how is it produced? Describe a case in which it may appear, and mention its treatment.

### SECOND HALF

3. Describe the steps you would take to establish the diagnosis of an abdominal tumour in the right hypochondrium, giving the conclusion you would draw from each.

4. Describe the anatomical relations and the blood supply of the tonsil. How would you diagnose a peritonsillar abscess, and how would you treat a case?

Or,

5. A patient, age 40, is suffering from a mass of enlarged cervical glands of the left side of the neck. Describe, in detail, how you would proceed to establish a diagnosis, giving the inferences you would draw from each step.

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## MIDWIFERY AND DISEASES OF WOMEN

Examiners—	{	DR. KEDARNATH DAS, C.I.E., M.D.	
		LT.-COL. V. B. GREEN-ARMYTAGE, M.D.,	
		F.R.C.P., I.M.S.	
		MAJOR P. FLEMING GOW, I.M.S.	
		DR. NARENDRANATH BASU, L.M.S.	
		„ SATINATH BAGCHI, M.Sc., M.B., M.O.	
		„ BAMANDAS MUKHERJEE, L.M.S.	

## FIRST PAPER

## FIRST HALF

*The figures in the margin indicate full marks*

- |   |    |
|---|----|
| 1. Describe the lymphatic supply of the cervix and of the body of the uterus. | 65 |
| 2. How would you investigate a case of habitual abortion?                     | 60 |

## SECOND HALF

- |  |    |
|--|----|
| 3. How would you diagnose a case of twin pregnancy, and how would you manage a twin labor? | 60 |
| 4. How will you treat a case of streptococcic puerperal fever?                             | 65 |

## SECOND PAPER

*The figures in the margin indicate full marks*

## FIRST HALF

- |  |    |
|--|----|
| 1. Describe the causes of delayed puberty in a girl.   | 60 |
| 2. How would you conduct the third stage of normal labor? What complications may arise from its mismanagement? | 65 |

## SECOND HALF

- |   |    |
|---|----|
| 3. What are the symptoms, signs, and terminations of tubal pregnancy? | 60 |
| 4. Describe the causes of menorrhagia in a woman about 40 years old.  | 65 |

*Or,*

Discuss the causes and treatment of rickets in children.

# I. E. Examination 1932

## MATHEMATICS

(COMPUTATION, MENSURATION, AND STATICS)

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

*Examiners*—{ Mr. J. M. BOSE, M.A., B.Sc. (EDIN.)  
Mr. KHAGENDRANATH CHAKRABARTI, M.Sc.

### FIRST HALF

1. A conical chimney is 60 feet high. The section at the base consists of two concentric circles, 10 and 5 feet diameter. At the top the corresponding figures are 6 feet and 3 feet.

Calculate the total number of bricks used, allowing 1,200 bricks per 100 cubic feet.

2. (a) The entropy  $\phi$  of one pound of dry saturated steam is given by

$$\phi = \log_e \frac{t}{273 \cdot 7} + \frac{797}{t} - 0.695,$$

$t$  being the absolute temperature. Calculate the entropy when  $t = 413.7$ .

(b) Find the value of  $\frac{3}{(0.974)_{1.111}}$ .

3. (a) From a telegraph post a house appears to be  $35^\circ$  west of  $N$ . From the next telegraph post  $B$ , the house appears to be  $20^\circ$  west of  $N$ . If the line  $BA$  is 88 yds. long in a direction  $10^\circ$  west of  $N$ , find the distance of the house from  $A$ .

(b) If  $S$  is the circumcentre of a triangle  $ABC$ , prove that the radius of the circle circumscribed to the triangle  $BSC$  is  $\frac{R}{2 \cos A}$ .

4. A gate, 7 ft. wide and 4 ft. high, swings through an angle of  $60^\circ$ . Find the angle between the new position of a diagonal and the old position of a horizontal bar of the gate.

### SECOND HALF

1. Prove that any system of coplanar forces acting upon a rigid body can be reduced to a force acting at an arbitrary point of the body together with a couple. Hence deduce the conditions of equilibrium.

A picture hangs symmetrically by means of a string passing over a nail and attached to two rings in the picture. What is the tension of the string when the picture weighs 10 lbs., if the string be 4 ft. long and the nail distant 1 ft. 6 inches from the horizontal line joining the rings?



2. Shew that the work done in raising a number of particles from one position to another is  $Wh$ , where  $W$  is the total weight of the particles, and  $h$  is the distance through which the C.G. of the particles has been raised.

Find the H.P. of an engine that would empty a cylindrical shaft full of water in 32 hours, if the diameter of the shaft be 8 ft. and its depth 600 ft.

3. A uniform ladder of length 70 ft. rests against a vertical wall with which it makes an angle of  $45^\circ$ , the coefficients of friction between the ladder and the wall and ground respectively being  $\frac{1}{3}$  and  $\frac{1}{4}$ . If a man, whose weight is one-half that of the ladder, ascend the ladder, how high will he be when the ladder slips?

4. If a body be placed with its base in contact with a horizontal plane, it will stand or fall according as the vertical line drawn through the C.G. of the body meets the plane within or without the base.

A number of equal bricks are piled on top of one another, the lowest being on a horizontal table, and each successive one projecting over the one below it a distance equal to  $\frac{1}{n}$  of the length of a brick. How many can be thus placed without their upsetting?

5. A basket with a man in it, weighing altogether 160 lbs., is suspended from the lower block of a system of weightless pulleys, in which the same string passes round all the pulleys. The man is on the point of pulling himself up by applying a force of 16 lbs. weight at the free end of the string: find the number of pulleys and the stress on the supporting beam.

## DIFFERENTIAL CALCULUS AND PLANE GEOMETRY

*The questions are of equal value*

*Not more than THREE questions to be attempted from each half*

### FIRST HALF

1. What is meant by the gradient of a curve?

If a curve be drawn in which the ordinate represents at any time the kinetic energy of the body, and the abscissa the corresponding space described, what does the gradient represent?

2. Differentiate the following:—

$$\log \cos bx, e^{an^{-1}x}.$$

If  $\tan z = \sin y$  and  $\tan y = \sin x$ , find  $\frac{dy}{dx}$ .

3. Obtain the general differential equation of the tangent to any curve in Cartesian co-ordinates.

Find the tangents at the points (2, 0) and (2, 2) of the curve

$$x^2 + y^2 - 2x - 2y = 0.$$

4. Evaluate the following:—

$$\int \frac{x^2 dx}{\sqrt{1-x^2}}; \int \frac{\sin 2x dx}{a+b \cos x}; \int \frac{dx}{\sqrt{(a+bx)(a'-b'x)}}$$

5. Prove the rule for integration by parts.

Evaluate

$$\int \sqrt{a^2 + x^2} dx; \quad \int \frac{\sin^{-1} x \, dx}{(1-x^2)^{\frac{3}{2}}}.$$

## SECOND HALF

1. Find the area of a triangle in terms of the co-ordinates of its vertices.

Prove that the area of the triangle formed by the points  $(a^2, 2a)$ ,  $(am^2, 2am)$ ,  $(an^2, 2an)$  is double the area of the triangle formed by the points  $\{alm, a(l+m)\}$ ,  $\{amn, a(m+n)\}$ , and  $\{anl, a(n+l)\}$ .

2. Find the equation of the perpendicular drawn from the point  $(2, 3)$  to the join of the points  $(-1, -7)$  and  $(-3, 5)$ . Find the length of this perpendicular and the co-ordinates of its foot. Find also the points at which the perpendicular cuts the axes of co-ordinates.

3. Find the condition that the three straight lines

$$a_1x + b_1y + c_1 = 0, \quad a_2x + b_2y + c_2 = 0, \quad \text{and} \quad a_3x + b_3y + c_3 = 0$$

may meet at a point.

Prove analytically that the three perpendiculars drawn from the vertices of a triangle upon the opposite sides all meet at a point.

4. Find the centre and the radius of the circle

$$x^2 + y^2 - 6x - 6y + 10 = 0$$

and shew that this circle touches the circle  $x^2 + y^2 = 2$  at the point  $(1, 1)$ . Find also the equation of the circle described on the join of the centres of the above circles as diameter. (Draw a diagram showing all these circles).

5. Find the length of the chord intercepted by the circle  $x^2 + y^2 + 2gx + 2fy + c = 0$  on a given straight line  $lx + my + n = 0$  and hence deduce the condition for tangency of this straight line.

Prove that the length of the common chord of the two circles  $(x-a)^2 + (y-b)^2 = c^2$  and  $(x-b)^2 + (y-a)^2 = c^2$

$$\text{is} \quad \sqrt{4c^2 - 2(a-b)^2}.$$

6. Shew that  $y = mx + \frac{a}{m}$  touches the parabola  $y^2 = 4ax$  whatever the value of  $m$  may be.

Find the co-ordinates of the point of intersection of the two tangents  $y = mx + \frac{a}{m}$  and  $y = m'x + \frac{a}{m'}$ , and deduce the condition that this point of intersection may lie on the latus rectum.

## GENERAL CHEMISTRY

*The questions are of equal value**Not more than THREE questions are to be attempted in EACH half*

Examiners— $\left\{ \begin{array}{l} \text{MR. N. N. SEN, M.Sc. (CAL.), A.I.C., A.R.S.M.} \\ \text{(LOND.)} \\ \text{DR. ALI KARIM, D.Sc. (LOND.), D.I.C.} \end{array} \right.$

## FIRST HALF

1. Write short notes on the following :—

Disassociation; Diffusion; Dialysis; Osmosis.

Admitting the analogy between gaseous and osmotic pressures, calculate the osmotic pressure of a 1 per cent. solution of mannitol,  $C_6H_{14}O_6$  at  $20^\circ\text{C}$ .

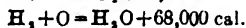
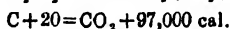
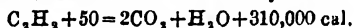
2. Chlorine gas is passed through (a) milk of lime kept cool, (b) milk of lime kept hot, (c) dry slaked lime. State what happens in each case, and describe how you would prepare (1) oxygen, (2) hypochlorous acid, and (3) chlorine from the chief product obtained in reaction (c).

3. Describe and explain the processes by which crude copper is refined on a large scale.

Write down the reactions that take place when solution of (1) potassium iodide, (2) potassium cyanide, (3) potassium ferrocyanide, and (4) ammonia, is slowly added to a solution of copper sulphate. What is the importance of these reactions in analytical chemistry?

4. Explain fully the meaning of (1) Hess's law of constant heat summation (2) heat of formation, (3) heat of reaction, and (4) heat of combustion. Does the heat of a chemical reaction vary with temperature? If so, on what factors does the extent of variation depend?

Calculate the heat of formation of acetylene from the following data :—



## SECOND HALF

5. Explain, with illustrations, the following terms : (1) Reversible reaction; (2) Isomorphism; (3) Double salt; (4) Emulsion; (5) Electrolysis; (6) Ignition.

6. Complete the following equations, describing the chemical and physical changes involved and mentioning the conditions necessary for the reactions :—

(a) Yellow prussiate of potash + Ferrous sulphate + Sulphuric acid + Potassium chlorate.

(b) Soda ash + Calcium hydroxide.

(c) Alum + Lead nitrate.

(d) Glauber salt + Barium chloride.

(e) Zinc white + Hydrochloric acid + Sulphuretted hydrogen.

(f) Common salt + Manganese dioxide + Sulphuric acid.

7. Write notes on the preparation, properties, and uses of any three of the more important compounds of silicon.

8. Give a brief outline of the process of manufacturing potassium dichromate, and enumerate its principal industrial uses. How would you obtain Guinet's green from potassium dichromate on a commercial scale? Describe the properties and uses of this product.

## PHYSICS

*Only THREE questions to be attempted from EACH half*

*The questions are of equal value*

Examiners—{ MR. P. C. MAHALANOBIS, M.A. (CANTAB.)  
 ,, A. C. CHAKRABARTI, M. SC., M.A. (CANTAB.),  
 B.E.

## FIRST HALF

1. State and explain Kirchoff's Laws.

A house is lighted by a battery of 110 volts. When only lamps are used the current is 2 amps. The resistance of the battery and lines is 5 ohms. An electric heater is also switched on and this itself is found to take 3 amps. What will be the current through the lamps now?

2. A magnetic needle is mounted in a frame in such a way that it can rotate freely in every direction. The frame floats on a large trough of mercury. A long straight horizontal wire carrying a current is brought near the trough. Describe the movements of the needle, explaining the laws governing such movements.

3. Explain why Hydrogen has been selected as the standard thermometric substance. How is the Hydrogen standard used for calibrating a mercury thermometer?

4. What is dew-point and how can it be measured experimentally? What is the bearing of dew-point on the formation of dew and fog?

## SECOND HALF

5. A glass of water at room temperature at Shibpur is to be cooled quickly with a lump of ice. Will you allow the ice to float in the water or hold it down at the bottom? Explain fully the reasons for your answer.

6. Explain how a reasonably colour free image of an electric lamp can be produced with the help of suitable lenses.

7. How can the magnetic declination of a place be measured with the help of a sextant and a compass? Fully explain the necessary adjustments.

8. Write short notes on any four of the following :—

(a) Nodal points (b) Ramsden's eyepiece, (c) Epidiascope, (d) Standard calorie, (e) Total heat, (f) Atomic heat, (g) Self-induction, (h) Electroplating.

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## MATHEMATICS

(CALCULUS AND PLANE GEOMETRY)

*The questions are of equal value*

Examiners—{MR. J. M. ROSE, M.A., B.SC. (EDIN.)  
DR. N. N. SEN, M.A., D.SC.

## FIRST HALF

*Not more than THREE questions to be attempted*

1. What is the geometrical meaning of the first derived function of  $f(x)$ ?  
If it is represented by the limiting value of

$$\frac{f(x+h)-f(x)}{h}$$

when  $h$  is zero, find a similar expression for the second derived function of  $f(x)$ .

Differentiate from first principles

$$\log ax \text{ and } \tan bx.$$

2. Trace the graph of  $y = \log x$  and find from your graph the value of  $\frac{dy}{dx}$  when  $n = 8.63$  and when  $x = 1$ .

3. From a circular sheet of metal a sector is removed and the rest folded so as to form a cone of maximum volume. Find the angle of the sector.

4. Evaluate the following :—

$$\int \frac{dx}{\sqrt{(x-a)(x-b)}}, \int \sqrt{\frac{x-a}{x-b}} dx, \int_a^\pi \frac{dx}{a+b \cos x}.$$

5. State briefly the principle of any planimeter you have studied and the method of procedure.

Show how to use the planimeter to find the position of the centroid and the moment of inertia of and plane area.

## SECOND HALF

*Only FOUR questions are to be attempted*

1. Obtain the equation of a straight line in the form

$$\frac{x}{a} + \frac{y}{b} = 1.$$

Find the equation of the straight line passing through the origin and the point of intersection of the straight lines

$$x - y - 4 = 0$$

$$\text{and } 7x + y + 20 = 0$$

and prove that it bisects the angle between the lines.

2. Find the equation of the circle which is described on the straight line joining  $(x_1, y_1)$  and  $(x_2, y_2)$  as diameter.

Shew that the two circles

$$x^2 + y^2 + 2ax + c = 0 \text{ and } x^2 + y^2 + 2by + c = 0$$

touch if

$$\frac{1}{c} = \frac{1}{a^2} + \frac{1}{b^2}.$$

3. Prove that the straight line

$$y = mx + \frac{a}{m}$$

always touches the parabola

$$y^2 = 4ax.$$

Shew that the locus of the point of intersection of perpendicular tangent lines to a parabola is a straight line.

4. Define conjugate diameters of an ellipse.

Shew that (i) the eccentric angles at the ends  $P$  and  $D$  of a pair of conjugate diameters differ by a right angle, and (ii) the area of the parallelogram formed by the tangents at the ends of the conjugate diameters  $PCP'$  and  $DCD'$  is constant.

5. Find the equation of the radical axis of a pair of circles.

If  $S=0$  and  $S'=0$  represent two circles, discuss the meaning of the equation

$$S - \lambda S' = 0.$$

Prove that the radical axes of three circles taken in pairs meet at a point.

6. Find the angle between the lines

$$ax^2 + 2hxy + by^2 = 0$$

and deduce the condition that the above lines should be perpendicular to each other.

Shew that the product of the perpendiculars from the point  $(x', y')$  on the lines

$$ax^2 + 2hxy + by^2 = 0$$

is equal to

$$\frac{ax'^2 + 2hx'y' + by'^2}{\sqrt{(a-b)^2 + 4h^2}}.$$

## MATHEMATICS

(HYDROSTATICS, DYNAMICS, AND APPLIED MECHANICS)

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

Examiners—{ MR. T. A. GARLAND.  
,, KHAGENDRANATH CHAKRABARTI, M.Sc.

FIRST HALF

*THREE questions are to be attempted*

1. Define whole pressure of a fluid upon a surface.

A hole six inches square is made in a ship's bottom 20 feet below the water line. What force must be exerted to keep the water out by holding a piece of wood against the hole, assuming that a cubic foot of sea-water weighs 64 lbs.?

2. Find the conditions of equilibrium of a body floating freely in a liquid.

A man whose weight is 10 stones and whose specific gravity is 1.1 just floats in water by holding under the water a quantity of cork. If the specific gravity of the cork be .24, find its volume.

3. Enunciate and prove the principle of Conservation of Momentum.

A shot of mass 700 lbs. is fired with a velocity of 1,700 ft. per second from a gun of mass 38 tons. If the recoil be resisted by a constant force equal to the weight of 17 tons, through how many feet will the gun recoil?

4. Enunciate Newton's Laws of Motion.

Sixteen balls of equal mass are strung like beads on a string; some are placed on a smooth inclined plane of inclination  $\sin^{-1} \frac{1}{3}$  and the rest hang over the top of the plane. How have the balls been arranged if the acceleration at first be  $\frac{g}{2}$ ?

5. A man weighing 12 stones stands on a lift which begins to descend with an acceleration of 10 ft./sec.<sup>2</sup> Find the pressure of the floor on the man. What is the pressure when the lift is moving uniformly? Find the pressure of the man on the floor when the lift is descending with a retardation of 10 ft./sec.<sup>2</sup>.

## SECOND HALF

1. A beam  $AB$  is 20 ft long. It is supported at the end  $A$  and at a point 12 ft. from  $A$ . There is a uniformly distributed load of  $\frac{1}{4}$  ton per foot run along the whole beam. Calculate the reactions, bending moments, and shearing forces at the supports, and sketch the bending moment and shearing force diagrams, stating the scale used.

2. Show that the distribution of shearing stress across the vertical section of a loaded beam is parabolic. Find the maximum shearing stress produced by a shearing force of 20 tons in the vertical section of a hollow beam of square section if the outside width is 5 inches and the thickness of the material 1 inch.

3. At a point in the web of a loaded girder the longitudinal stress is 4.8 tons per square inch and the shear stress is 2.5 tons per square inch. Find the magnitudes and directions of the principal stresses at the point.

4. Assuming that  $M/I = E/R$  prove that the deflection of a simply supported beam with a concentrated load  $W$  at the centre is equal to  $WL^3/48EI$ . Prove any other formulae used.

5. A masonry dam is of rectangular section 12 ft. wide.

(a) How high can the dam be made above ground level without overturning, assuming that the water level reaches the top of the dam?

(b) What is the greatest compressive stress on the base?

(c) What is the average shear stress on the base?

Weight of masonry is 140 lbs. per cubic foot.

„ „ water „ 62.5 „ „ „ „

## APPLIED PHYSICS

*Only THREE questions to be attempted from EACH half*

*The questions are of equal value*

Examiners—{ MR. A. C. CHAKRABARTI, M.Sc., M.A. (CANTAB.)  
 PROF. P. N. GHOSH, M.A., Ph.D., Sc.D.,  
 F.INST. P.

## FIRST HALF

1. How is the guard-ring principle applied to control the loss from the surface of a body which is conducting heat? Describe Berget's experiment on the thermal conductivity of mercury.
2. What is Van der Waal's equation? What do the constants of the equation represent? What light does this equation throw on the observed differences in the behaviours of different gases and vapours?
3. Define Kelvin's work-scale of temperature. Prove that it is identical with the absolute gas scale.
4. A certain mass of gas is caused to expand isothermally to  $n$  times its volume. The same mass of gas under the same initial conditions of temperature, pressure, and volume is then caused to expand at constant pressure to  $n$  times its volume. Compare the changes in entropy in the two cases. ( $\gamma = 1.4$ .)

## SECOND HALF

5. Prove Gauss's theorem on Total Normal Induction over a closed surface. Obtain an expression for the electric force just outside a charged conductor.
6. Describe and explain the use of Kelvin's Amperebalance.
7. What is the practical unit of capacity, and how is it connected to the C.G.S. electrostatic unit?  
 Determine the number of pairs of tinfoil plates 30 cms.  $\times$  25 cms. each, separated by paraffined paper 0.15 cm. thick required to form a condenser of one microfarad capacity. Dielectric constant of the paper = 3.
8. How would you test the—  
 (1) Electrical insulating property of mineral oil,  
 (2) Heat insulating property of saw-dust,  
 (3) Accuracy of the readings of an ammeter?

## MATERIALS OF CONSTRUCTION

*The questions are of equal value*

*Not more than FOUR questions to be attempted from EACH half*

Examiners—{ MR. R. R. GHOSH, B.A., B.E.  
 { RAI BAHADUR CHUNILAL SARKAR, B.E.

## FIRST HALF

1. Enumerate briefly but clearly the principal differences, in their uses for building construction, of Cast Iron, Wrought Iron, and Steel.



2. In concrete, define 'Matrix' and 'Aggregate.' State the materials suitable for aggregate. Where there is choice, to which would you give preference, and why? Describe the methods adopted in mixing and laying concrete.
3. What are the two classes of lime kilns, and what are the advantages of each? Describe, with sketches, one kiln of each class.
4. State the cause of dry rot in timber. How would you detect it and what would you do to stop its development? Mention the several expedients resorted to for the preservation of timber, with short notes of the processes.
5. Give P.W.D. specifications for White Painting and for Green Painting. How are Copal Varnish and French Polish prepared?

## SECOND HALF

1. Describe the characteristic qualities of slate, kunker, and limestone. Name the localities where each is found in India, and state what they are chiefly used for.
2. What wood is used in your home district for (1) doors, (2) chankata (door and window frames), (3) trusses? Where does it come from?
3. Mention the points you would note in inspecting a delivery of bricks for a building to be constructed of first class brickwork, and also give a specification for a first class brickwork.
4. Give a complete specification for sand to be used for (1) reinforced concrete floor, (2) interior plaster, of a building.
5. What is asphalt? Mention its different uses, and describe the method of applying it in each case.

## DETAILS OF CONSTRUCTION

*The questions are of equal value*

*Examiners—* { MR. PULINBIHARI GHOSH, B.Sc., B.E.  
MR. P. N. BANERJEE, M.A., A.M.I.E.

## FIRST HALF

*Answer ANY FOUR questions, of which Question 2 must be one*

1. When will you recommend use of piles in foundation?

The load carried by a wall is 10 tons per foot run. The subsoil cannot bear more than  $\frac{1}{4}$  ton per sq. foot. A test pile was driven by a rammer 5 cwt. in weight falling from a height of 4 feet and during the last five strokes the average penetration was found to be  $\frac{1}{8}$  inch. If the width of foundation is restricted to 8 feet, find the distance apart centre to centre of piles, and draw a plan of the foundation bed for a length of 6 feet, showing the arrangement of piles.

2. What is meant by extended foundation?

A 25" brick wall carries a load of  $3\frac{1}{2}$  tons per foot run up to plinth level. Make a dimensioned sketch of the foundation footings, giving all calculations necessary from the following data:—

Height of plinth—3 feet.

Depth of foundation—3 feet.

Safe bearing power of soil—0.9 ton per s.ft.

If the angle of repose of the soil is  $30^\circ$  and the weight of earth per c.ft. is 112 lbs., find the minimum depth of foundation for the wall.

3. What is meant by Heading bond? Illustrate its use with sketches.

Make an isometric drawing (scale— $\frac{1}{4}$  full size) of two consecutive layers of a 25" square brick pier, showing the brick-bonding clearly.

4. Explain any five of the following with the help of neat sketches:—

- (a) Well curb.
- (b) Kerb and channel.
- (c) Random rubble.
- (d) Level bedded rubble.
- (e) Flat bedded rubble.
- (f) Raking shores.
- (g) Flying shores.
- (h) Relieving arch.

5. Write a short critical note, with sketches, on the different types of pointing used in building construction.

Write a short specification for (i) Lime pointing, (ii) Cement pointing.

6. Name the various materials that can be used for road surfacing. What are the essential qualities of a good road metal?

Show, by dimensioned sketches, the usual cross sections of the following:—

- (a) A road, 24 feet wide in the plains of Bengal, suitable for ordinary traffic.
- (b) A hill road on steep side slope, showing the arrangement of drainage to be provided for.

## SECOND HALF

*Only FOUR questions are to be answered*

1. Write a short specification for terraced roofing on two layers of burnt earthen tiles.

2. Sketch a wooden centering that you will use for a semicircular arch to share an opening 8'-0" wide in a brick wall 20" thick. Show how you will erect and strike the centering.

3. Discuss the effects of gradient on a road.

What is ruling gradient?

Is it advisable to avoid grading a road in a cutting? If so, why?

4. Briefly state the considerations on which the design of R.C. beams depend, and explain carefully the principle upon which the relative positions of the concrete and of the main steel reinforcements are determined.

5. What do you understand by (1) a tabled scarf joint with keys, (2) a secret dovetail joint?

Give a rough working sketch of a framed and braced batten door with suitable chaukat for a brickwork opening 7'-6"  $\times$  4'-0".

6. What do you understand by 'hips' and 'valleys' in a sloped roof? Show how you will protect a tiled roof from leaking at a hip and at a valley.

## SURVEYING

*Not more than FOUR questions to be attempted from EACH half*

*Mathematical tables will be supplied*

Examiners— $\left\{ \begin{array}{l} \text{MR. C. V. MILLER, A.C.G.I., B.Sc., A.M.I.} \\ \text{RAY BAHADUR G. C. DAS, B.E., A.M.I.E.} \end{array} \right.$  STRUCT.E.

## FIRST HALF

*The questions are of equal value*

1. A line of levels is run from station A to station B. The reduced level of station A is 73.56. Readings were taken in the following order :—

Chainage		B.S.		F.S.		Station A.
0		B.S.	4.36			
100		F.S.	8.77	B.S.	6.62	Change point. 1.
150		I.S.	9.71			
200		F.S.	7.92	B.S.	5.78	Change point. 2.
250		I.S.	8.26			
300		F.S.	9.83	B.S.	7.28	Change point. 3.
325		I.S.	7.36			
350		I.S.	1.74			
375		I.S.	8.26			
400		F.S.	7.89			Station B.

Draw up field books on the 'Rise and Fall' method and the 'Height of Instrument' method to find the reduced level of Station B. Apply the checks you consider necessary.

2. Describe clearly, with the aid of sketches, how the line of collimation is set at right angles to the trunnion axis in a theodolite—

- (a) whose telescope can transit,
- (b) whose telescope cannot transit.

3. (a) Show how you would obtain the internal angles at each angular point of a four-sided traverse with a prismatic compass, when there is considerable local magnetic attraction at one station, the other three being free of any local magnetic attraction.

(b) Draw the plan of a prismatic compass, showing the positions of the prism, sight vane, and graduated ring when reading a bearing of  $240^\circ$ . Print on the graduated ring the  $0^\circ$ ,  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$  divisions.

4. Two points A and D are connected by a traverse survey ABCD and the following records are obtained.  $AB=143$  feet,  $BC=102$  feet.  $CD=97$  feet, Angle  $ABC=81^\circ 35'$ , angle  $BCD=188^\circ 25'$ .

Assuming that the whole circle bearing of AB is  $282^\circ 57'$ , determine :—

- (i) the latitude and departure of D relatively to A.
- (ii) the length AD,
- (iii) the angle BAD.

5. Describe the corrections for 'curvature' and 'refraction' in levelling. Deduce formulae that express their value. Under what circumstances should these corrections be applied?

In levelling across a river the horizontal web cut the lower edge of a large signboard 15.56 feet above the level of the ground, the distance being exactly  $2\frac{1}{2}$  miles from the instrument. The back sight to a bench mark close by was 5.50 feet, the reduced level of the bench mark being 57.50. Determine the true level of the ground at the signboard.

6. A cutting runs due east and west through ground sloping north and south. The formation level is 15 feet below the surface centre line and is 20 feet wide. The ground slopes upwards on the north side of the centre line 1 vertical to 6 horizontal and on the south side the ground slopes downwards 1 vertical to 10 horizontal. The sides of the cutting slope 1 vertical to  $1\frac{1}{2}$  horizontal. Calculate the positions of the outcrops. Deduce the formulae you use.

## SECOND HALF

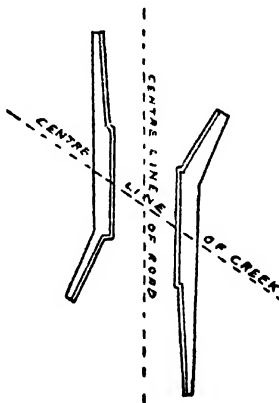
*The figures in the margin indicate full marks*

1. Having only a footrule, a tape, and a pocket book with you, 25  
how would you find out the approximate distance of an inaccessible point?

Draw a scale 330 feet to an inch and explain its use.

2. What is 'contouring'? Explain its usefulness. Shew, by a 25  
sketch, how to find the cubic content of a reservoir from contours.

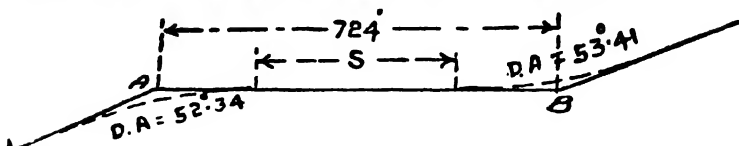
8. Explain how to determine the true meridian (1) by equal  $83\frac{1}{2}$   
altitude of a star, (2) by maximum elongation of a circumpolar star.



4. Explain how you would proceed to lay out a skew culvert on  $83\frac{1}{2}$   
the ground as sketched above.

Necessary pillars are to be shewn.

5. Find out what should be the smallest degree (i.e. easiest) of  $88\frac{1}{2}$  curve at A and B to leave a straight length  $S$  = about 280 :—



N.B.—Boys can use their log tables.

## DRAWING

*The figures in the margin indicate full marks*

Examiners—{ MR. T. A. GARLAND, B.Sc. A.M.I.E.  
MR. Q. A. RAHAMAN, B.Sc.

### FIRST HALF

1. Fig. 1 shows the sectional plan and sectional elevation of one 100  
abutment of a simple culvert. Draw a dimensioned isometric view  
of this abutment, to the natural scale, with corner P in front.  
Scale 2 ft. to 1 inch. Use your own judgment in proportioning  
those parts not shown.

2. Fig. 2 shows a plan of the space available for a stairway 50  
in a dwelling house. The first floor is 14 ft. above the ground floor.  
Show, by means of neat sketches, a suitable design for a stairway,  
and give enlarged views, showing how the various parts are con-  
nected together.

Scale for general views 2 ft. to 1 inch.

Scale for details  $\frac{1}{2}$  or  $\frac{1}{4}$  full size.

Or,

Make dimensioned sketches of a portion of a sloping roof con-  
sisting of Ranigunjje Tiles supported on wooden battens and rafters.  
Give enlarged views, showing clearly how the tiles overlap and how  
they are secured to the roof.

Scale of details  $\frac{1}{2}$  full size.

### SECOND HALF

1. Two dimensioned views of a  $1\frac{1}{2}$  inch gun-metal steam cock 120  
are given.

You are required to make a  $\frac{3}{4}$  full size scale drawing of the  
following views only :—

(a) Copy the elevation as given.

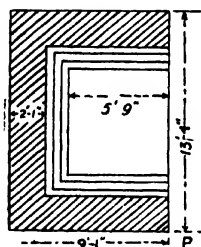
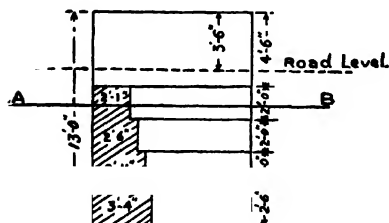
(b) Project an end view from this elevation, as seen when look-  
ing at the screwed branch of the cock. The left half of this view  
to be in section along AB.

(Note.—Dotted lines are not required and only main dimensions  
are to be given.)

2. Make a free-hand sketch of a connecting rod end with strap, gib, and cotter. Explain the use of a gib. 30

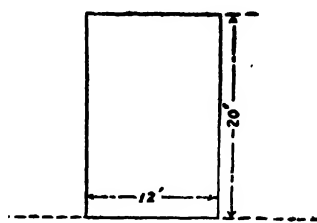
Or,

3. Show by free-hand sketches the different forms of screw threads which are used, and state in what special circumstances you would prefer to use each of these forms. 30



PLAN ON AB

Fig. 1



VERANDAH

Fig. 2



## MECHANICAL ENGINEERING

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

Examiners—{ Mr. P. C. GANGULI, B.Sc. (GLAS), B.E.S.  
                  ,, J. TULLIS, B.Sc.

## FIRST HALF

1. In an engine trial dry saturated steam was supplied at a pressure of 180 lbs. per sq. inch abs. (temperature,  $373^{\circ}\text{F}$ .; latent heat 854 B.Th.U.). The weight of steam used per hour was 7,200 lbs. and the I.H.P. was 600. Taking the exhaust pressure as 8 lbs. per sq. inch abs. (temperature  $141^{\circ}\text{F}$ .), calculate (1) the available heat supplied per minute, (2) the thermal efficiency, and (3) the efficiency ratio. Prove any formula that you use.

2. The following observations were taken when determining the dryness fraction of steam with a throttling calorimeter :—

(a) Temperature of steam in main steam pipe :  $324^{\circ}\text{F}$ . [Latent heat 897 B.Th.U.]

(b) Temperature of steam after throttling  $260^{\circ}\text{F}$ .

(c) Pressure of steam after throttling 10 lbs. per sq. inch abs. [Temperature of saturated steam at this pressure is  $193^{\circ}\text{F}$ ]

Take specific heat of steam at constant pressure = 0.5. Find the dryness fraction of steam. State clearly the difference between adiabatic expansion and throttling.

3. Explain fully the construction of the Reuleaux valve diagram.

Given : connecting rod,  $3\frac{1}{2}$  crank long; travel of valve, 4 inches; angle of advance,  $30^{\circ}$ ; cut off, 0.7 of stroke at both ends; release at 0.95 of stroke at both ends. Find outside and inside laps and the lead for each end of the valve.

4. What is an epicyclic train of wheels?

An epicyclic train of wheels if constructed as follows : A fixed annular wheel,  $A$ , and a smaller concentric wheel,  $B$ , are connected by a compound wheel  $A_1B_1$ , the portion  $A_1$  gearing with the wheel  $A$  and  $B_1$  with  $B$ .

The compound wheel revolves on a stud which is carried around on an arm which revolves about the centre of  $A$  and  $B$ .  $A$  has 180 teeth,  $B$  20, and  $B_1$  80, the pitch of the teeth of  $A$  and  $A_1$  being twice the pitch of  $B$  and  $B_1$ .

How many revolutions will  $B$  make for one turn of the arm?

5. Find the relation between the height and the angular velocity in the case of an equal armed Porter Governor. In a governor of the above type each ball weighs 8.5 lbs. and the central load is 70 lbs. For the lowest and highest positions of the sleeve the arms are inclined at  $30^{\circ}$  and  $40^{\circ}$ , respectively to the vertical. Find the travel of the sleeve if the arms are 10 inches long and the speed when the sleeve is in the mid position.

## SECOND HALF

1. Describe, with the aid of neat sketches, a form of carburettor commonly used on motor car engines.

2. In a steam engine and boiler set where the firing is done by hand, it is found that steam is not kept up to the proper pressure. State what you think is the cause of the trouble. Natural draught is used.



3. Describe some quick return motion, such as is used in a planing machine.

4. Describe carefully, in detail, how you would 'blow' the gauge glasses of a boiler. State the common faults to be watched for by the boiler attendant who may make a mistake.

5. Make a sketch of a boiler safety valve.

## ELECTRICAL ENGINEERING

*The questions are of equal value*

Examiners—{ MR. J. D. CHAUDHURI, B.Sc. (MANCHESTER).  
,, G. O. McLEAN, M.Sc., A.M.I.E.E.

### FIRST HALF

*Answer ANY THREE questions*

1. (a) Give the complete wiring diagram of a 440 volt D.C. switch board. 50

(b) Give a sketch, showing how the bus bars are fixed.

2. It is desired to work a 25 K.W.D.C. Dynamo 93% eff., speed 1,000 R.P.M., and terminal voltage 150 as a motor. The field excitation of the motor must be the same as the generator. 50

Determine the speed at which the motor will have to be worked.

3. In a factory there are four motors of 10, 20, 30, and 12 K.W. capacity. The supply is 220 volts. The motors are situated 150, 500, 800, and 1,000 ft. from the distribution pillar. Find out the section of conductors for the service mains. 50

The conductivity of copper is 40,000 for 20°C.

4. Define 'virtual value' and explain what is meant by 'Form Factor'. 50

Add the following E.M.F.'s vectorially, and give the virtual value of the resultant E.M.F.

$$e_1 = 100 \sin \omega t.$$

$$e_2 = 80 \sin \left( \omega t + \frac{\pi}{6} \right).$$

$$e_3 = 60 \cos \omega t.$$

$$e_4 = 70 \cos \left( \omega t - \frac{2\pi}{8} \right).$$

5. A circuit consists of an inductance of 0.25 henry, a 100 mfd. condenser, and a non-inductive resistance of 50 ohms. joined in series. If the applied voltage is 200 at  $f=50$ , calculate the impedance, current, power factor, and the voltage across the various parts of the circuit. Give vector diagram. 50

## SECOND HALF

*Answer Question 1 and ANY TWO others*

1. Explain, with diagrams and characteristic curves, the three types of field connections, known as Series, Shunt, and Compound wound, used on D.C. machines. What is the practical application of each type when used as (i) a dynamo, and (ii) a motor? 50

2. What is the function of an Interpole on a compound wound dynamo? 50

If, due to bad design, the interpoles are too weak, how could sparkless commutation be attained? Explain the *theory* of your answers.

3. Explain, by defining each, the difference between Resistance, Reactance, and Impedance, of an A.C. circuit. 50

A transmission line when carrying 150 amps. direct current has a 75 volt drop. When carrying alternating current of 50 cycles, the inductance is 0.0818 henry. Calculate the resistance, reactance, and impedance of the line.

4. The voltage of a circuit can be represented by  $v = V \sin \omega t$  and the current by  $i = I \sin (\omega t - \phi)$ . 50

Draw these vectors, and explain why  $\cos \phi$  is called the Power Factor.

Show vectorially the effect of adding loads to the circuit having—

(a) a resistance of  $R$ , ohms and reactance of  $X$  ohms.

(b) a resistance of  $R$ , ohms and capacitance of  $Y$  ohms.

5. Why are large power stations equipped with 3 phase alternators instead of D.C. dynamos, or single-phase alternators? 50

How much copper is saved by transmitting 5,000 K.W. a distance of 2 miles by a 3-phase line at 5,000 volts instead of by a D.C. line at 1,000 volts.

Assume unity P.F. and copper fully loaded in both cases at 1,000 amps. per sq. inch.

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# B. E. Examination 1932

## MATHEMATICS

(C. E. and M. E.)

### THEORIES PAPER

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

*Examiner*—{MR. J. M. BOSE, M.A., B.Sc.  
PROF. N. C. GHOSH, M.A.

### FIRST HALF

1. Show that the  $n^{\text{th}}$  roots of  $\cos \alpha + i \sin \alpha$  are  $p, p\omega, p\omega^2, p\omega^3, \dots, p\omega^{n-1}$ , where

$$p = \cos \frac{\alpha}{n} + i \sin \frac{\alpha}{n}, \text{ and } \omega = \cos \frac{2\pi}{n} + i \sin \frac{2\pi}{n}.$$

Solve completely the equation  $x^{10} - 2x^5 + 2 = 0$ .

2. Expand  $\sin \alpha, \cos \alpha$  in powers of

$$\sin \frac{\alpha}{n}, \cos \frac{\alpha}{n},$$

where  $n$  is a positive integer. Deduce an expression for  $\tan \alpha$  in terms of  $\tan \frac{\alpha}{n}$ .

Given  $\tan \alpha = 2$ , obtain an equation in  $x$ , whose roots shall give the values of

$$\tan \frac{\alpha}{5}, \tan \frac{\alpha+\pi}{5}, \tan \frac{\alpha+2\pi}{5}, \tan \frac{\alpha+3\pi}{5} \text{ and } \tan \frac{\alpha+4\pi}{5}.$$

Or,

Expand  $\sin \theta$  in a series of powers of  $\theta$  ( $\theta$  being the circular measure of the angle).

Prove Huyghens' rule for the length of a small circular arc :—

'From eight times the chord of half the arc, subtract the chord of the whole arc, and divide the result by 8.'

To what degree of approximation does this rule give the length of the arc?

3. Sum the series

$$(i) \sin^2 \alpha + \sin^2 2\alpha + \sin^2 3\alpha + \dots + \sin^2 m\alpha.$$

$$(ii) 1 + \cos \theta + \frac{\cos 2\theta}{2} + \frac{\cos 3\theta}{3} + \dots + \frac{\cos n\theta}{n} + \dots \text{ (to infinity).}$$

Evaluate the sum in (ii) correct to one decimal place, when  $\theta = \cos^{-1} \frac{3}{5}$

4. When is an infinite series said to (i) converge, (ii) to converge rapidly? Test the following series as to convergency :—

$$(i) \frac{1}{a} - \frac{1}{a+b} + \frac{1}{a+2b} - \frac{1}{a+3b} + \dots,$$

where  $a$  and  $b$  are two positive numbers;

$$(ii) 1 + \frac{2^2}{2} + \frac{3^2}{3} + \frac{4^2}{4} + \dots,$$

$$(iii) 1 + 3x + 5x^2 + 7x^3 + 9x^4 + \dots$$

Is the series (ii) rapidly convergent? If so, evaluate the sum correct to 3 decimal places.

5. State (without proof) the rule for multiplication of two determinants of the same order. If  $D$  denotes the determinant

$$\begin{vmatrix} a_1 & b_1 & c_1 \\ a_2 & b_2 & c_2 \\ a_3 & b_3 & c_3 \end{vmatrix}$$

and if  $\Delta$  denotes the determinant of the same order as  $D$ , whose elements are the cofactors of the corresponding elements of  $D$ , form the product of the determinants  $D$  and  $\Delta$ , and thence show that  $\Delta = D^2$ .

— Or,

Evaluate in the simplest manner,

$$\begin{vmatrix} b+c & a-b & a \\ c+a & b-c & b \\ a+b & c-a & c \end{vmatrix}$$

Show that

$$\begin{vmatrix} 1 & x_1 & y_1 & z_1 \\ 1 & x_2 & y_2 & z_2 \\ 1 & x_3 & y_3 & z_3 \\ 1 & x_4 & y_4 & z_4 \end{vmatrix} = \begin{vmatrix} x_1-x_4 & y_1-y_4 & z_1-z_4 \\ x_2-x_4 & y_2-y_4 & z_2-z_4 \\ x_3-x_4 & y_3-y_4 & z_3-z_4 \end{vmatrix}$$

## SECOND HALF

6. Prove that

$$\int_0^{\infty} \frac{dx}{1-x^2} = 0.$$

Evaluate

$$\int_0^{\infty} \frac{dx}{1-x^2}, \int_0^{\infty} \frac{dx}{(a+bx^2)(a'+b'x^2)}, \int_0^{\infty} e^{-ax} \cos mx \, dx.$$

7. From the identity

$$\int_0^{\infty} e^{-ax} dx = \frac{1}{a}$$

prove that

$$\int_0^{\infty} x^n e^{-ax} dx = \frac{n!}{a^{n+1}}.$$

By differentiating

$$u = \int_0^{\infty} \frac{\log(1+a^2x^2)}{1+b^2x^2} dx$$

with respect to  $a$  prove that

$$\int_0^{\infty} \frac{\log(1+a^2x^2)}{1+b^2x^2} dx = \frac{\pi}{b} \log\left(\frac{a+b}{b}\right).$$

8. Solve the following differential equations :—

$$(1) x + y \frac{dy}{dx} = my.$$

$$(2) 8y - 7x + 7 = (3x - 7y - 3) \frac{ay}{dx}$$

$$(3) \frac{d^2y}{dx^2} + 4y = x \sin^2 x.$$

9. A light beam of length  $l$  is freely supported at both ends and carries a concentrated load  $W$  at a point distant  $a$  from one end.

Obtain a Fourier series for the bending moment at any point of the beam.

Or,

Obtain a solution of the differential equation

$$\frac{\partial^2 y}{\partial x^2} + \lambda^2 \frac{\partial^2 y}{\partial t^2} = 0$$

in terms of Fourier series for a heavy beam oscillating with its ends freely supported

$$\lambda^2 = \frac{w}{GEI}.$$


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## MATHEMATICS

(C.E. and M.E.)

## APPLICATIONS

Examiners— { MR. J. M. BOSE, M.A., B.Sc.  
 { PROF. NIKHILRANJAN SEN, D.Sc.

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

## FIRST HALF

1. A particle moving in a straight line is subject to a resistance which produces the retardation  $kv^3$ , where  $v$  is the velocity and  $k$  a constant. Show that  $v$  and the time  $t$  are connected with the distance traversed  $s$  by the equation

$$v = u / (1 + ksu), t = \frac{1}{2}ks^2 + s/u,$$

where  $u$  is the initial velocity.

As a result of certain experiments with the rifle, it was estimated that the bullet left the muzzle with a velocity of 2,400 ft. per sec. and that the velocity was reduced to 2,350 ft. per sec. when 100 yards were traversed. Assuming that the air-resistance varied as  $v^3$ , and neglecting gravity, calculate the time of traversing 1,000 yds.

2. Find the acceleration of a moving particle with reference to a pair of rectangular axes rotating in their own plane, the motion of the particle being also supposed to be in the same plane.

A particle is at rest on a smooth horizontal plane which commences to turn about a straight line lying in itself with angular velocity  $\omega$ ; if  $a$  be the distance of the particle from the axis of rotation at zero time, show that the body will leave the plane at time  $t$  given by the equation

$$a \sinh \omega t + \frac{g}{2\omega^2} \cosh \omega t = \frac{g}{\omega^2} \cos \omega t.$$

3. Obtain the differential equation of the orbit of a particle moving under a fixed central force. Find all the different possible orbits if the central force varies inversely as the cube of the distance.

If the orbit be of the form

$$r^n = A \cos n\theta + B \sin n\theta,$$

show that the force varies as  $r^{-(2n+3)}$ , where  $r$  is the distance from the centre of force.

4. Explain clearly the principles of momentum and energy.

A car of mass  $m$  ascends the inclined surface of a wedge of mass  $M$ , free to move horizontally. Show that the wedge moves with a horizontal acceleration  $mk \cos \alpha / (M+m)$ , where  $k$  is the acceleration with which the car ascends and  $\alpha$  the angle of the wedge. Find the reaction of the wedge on the car.

5. A particle is projected with a given velocity at a certain angle to the horizon. If the resistance of the air varies as the velocity, find the maximum height attained by the particle and show that its path has a vertical asymptote corresponding to the limiting velocity.

A shot is fired with initial velocity  $V$  at a mark in the same horizontal plane; show that if a small error  $e^\circ$  (degrees) is made in the angle of elevation, and an error  $2e^\circ$  in azimuth, the shot will strike the ground at a distance from the mark  $\pi V^2 e / 80g$ .

6. Find the equilibrium form of a heavy uniform string suspended vertically from two fixed points.

A heavy chain  $AOB$  is suspended from another chain  $DCE$  by vertical strings, which are so numerous that every element of  $AOB$  is attached to the corresponding element of  $DCE$ . If the weights of  $DCE$  and of the vertical strings are inconsiderable compared with that of  $AOB$ , show that the form of the chain  $DCE$  is a parabola when the chain  $AOB$  is horizontal in the position of equilibrium.

## SECOND HALF

1. Define elasticity of a perfect fluid, and find the measure of elasticity of a gas which obeys Boyle's Law.

The whole pressure on a rectangle  $ABCD$  is  $f(x)$  where  $AB$  is of given length  $a$  and  $BC=x$ . Prove that the pressure at any point of  $CD$  is

$$\frac{df}{adx}.$$

2. Find the condition of equilibrium of a solid floating in rotating liquid. If the floating body be a cylinder, find the depth to which it is immersed.

3. A solid floating in a liquid is displaced through a small angle  $\theta$ . Prove that the restorative moment of the fluid pressure is

$$gp\theta(Ak^2 - V.HG)$$

and deduce the condition of stability of equilibrium.

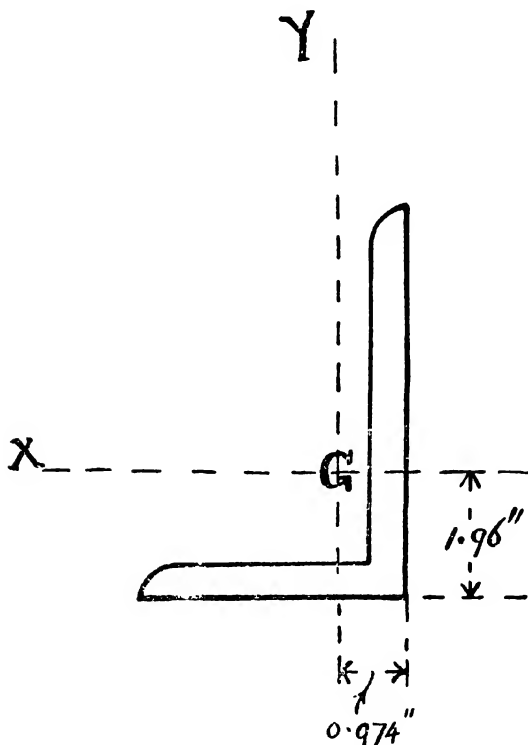
4. The square slab of side 1 foot floats with the square faces horizontal and immersed to a depth of 6 inches. Find the height of its metacentre above the base.

Investigate the nature of the equilibrium if the thickness of the slab be 10 inches.

5. Determine the direction of the principal axes for the  $6" \times 4" \times \frac{1}{4}"$  section (see fig.) at the centroid  $G$  and the values of the principal moments of inertia.

Area of the section = 4.75 sq. inches.

$$I_{GX} = 17.1 \text{ (inch)}^4.$$



6. A body of mass  $M$  is moving in two dimensions. The angular velocity of the body is  $\omega$  and the velocity of its centre of gravity is  $v$ . Show that the kinetic energy of the body is  $\frac{1}{2}Mv^2 + \frac{1}{2}Mk^2\omega^2$ , where  $k$  is the radius of gyration of the body with reference to an axis through C.G. perpendicular to its plane of motion.

A wheel is fitted with an axle of radius  $r$ , which projects on each side of the wheel. The axle rolls on two parallel rails each inclined at an angle to the horizontal, so that the wheel moves in a vertical plane between the rails. Show by the principle of energy that when the centre of the wheel has moved through a distance  $S$  from rest, the velocity is given by

$$v = \sqrt{\frac{2r^2 g S \sin \theta}{k^2 + r^2}}.$$



7. Two masses  $m_1$  and  $m_2$  are connected together by a light inextensible string passing over a perfectly rough pulley of moment of inertia  $I$  which turns on rough bearings, the moment of the frictional forces about the axis of the pulley being  $L$ .

Find the acceleration of the system and the displacement of  $m_1$  after  $t$  secs.

In order to turn a flywheel on its bearings, it is found necessary to exert a couple of 150 lb. ft. The mass of the flywheel is 3 tons and its radius of gyration is 2' 6". If the driving power is cut off when the wheel is running at 50 revs. per minute, find how long it will take to come to rest.

8. A rigid body is rotating about an axis with given angular velocity, when another axis in the body becomes suddenly fixed and the former axis becomes free at the same time. Find its new angular velocity.

A wheel of radius  $r$  and moment of inertia  $Mk^2$  rolls with a velocity  $u$  directly towards an obstacle of height  $h$  ( $h < r$ ). Find the least value of  $u$  in order that the wheel may just go over the obstacle.

## (CIVIL ENGINEERING)

### APPLIED PHYSICS

Examiners— { MR. A. C. CHAKRABARTI, M.Sc., M.A. (Cantab.)  
 { PROF. DEBENDRAMOHAN BOSE, M.A., PH.D.

Only THREE questions to be attempted from EACH half

The questions are of equal value

#### FIRST HALF

1. A street is lighted by lamps 80 feet apart fixed 20 feet above the ground. Obtain the percentage variation of horizontal illumination at points 4 feet above the street. (It may be assumed that the lamps radiate uniformly in the lower hemisphere.)

2. Describe any form of portable photometer and fully explain the method of using it.

3. Give the theory of Fresnel's biprism. How would you measure the wavelength of light with it?

4. A Ruhmkorff's coil is connected to the electrodes of a discharge tube which is gradually exhausted of air by a high vacuum pump. Discuss the natures of the phenomena observed at different pressures.

#### SECOND HALF

5. Calculate the maximum coefficient of performance theoretically obtainable from a refrigerating machine working between given limits of temperature. What are the conditions a machine must satisfy in order to have the ideal performance?

6. Why was Hydrogen found so difficult to liquefy? Explain the regenerative method of liquefying gases.

7. What is Black-body Radiation? How can it be produced? What are the laws obeyed by such radiation? Explain the use of any one of these laws for the measurement of high temperatures.

8. Write short notes on any three of the following :—

- (a) Accurate optical testing of the planeness of surfaces.
- (b) Comparison of candle powers of lamps having different colours.
- (c) Use of wireless in measuring longitudes of places.
- (d) Automatic recording of furnace temperatures.
- (e) Quick and accurate measurement of the strengths of sugar solutions.

## (MECHANICAL ENGINEERING)

### APPLIED PHYSICS

#### (METROLOGY)

Examiners— { Mr C R COPELAND.  
 „ J. RIFFKIN.  
 „ H BAZELEY, A C G. I., A M. I., C. E.

*The questions are of equal value*

*Attempt THREE questions only from EACH half*

#### FIRST HALF

1 Illustrate the meaning of the terms 'Tolerance,' 'Allowance,' 'Clearance,' 'Limits,' 'Interference Fit,' 'Transition Fit'

In a system of Limit Gauging the total error of manufacture permissible is not available for the operator Explain why this is so, and discuss the factors involved

From the workman's point of view the 'go gauge' is the safe one to work to Explain why this is not the best practice

2 You are required to set up a 6" centre screw cutting lathe with a lead screw having a pitch of 4 threads per inch and to cut a screw  $1\frac{1}{4}$ " diameter, 7 threads per inch (Whitworth) and 10" long at the end of a 24" shaft The thread is to be left handed. Give a diagram, showing the arrangement of the change wheels, and explain how you would do the job.

3 Define the terms Front Top Rake, Side Top Rake, True Rake. Lip Angle (or Front Cutting Angle) Plan Angle

Sketch and give particulars for a suitable tool for rough turning :  
 (i) Mild Steel, (ii) Cast Iron, (iii) Brass

4 Describe briefly various methods of gauging external diameters, and explain the circumstances for which each is particularly suitable.

#### SECOND HALF

1. In a mass production factory an order is received for 10,000 Discs, 4" dia. and  $\frac{1}{8}$ " thick, having a hole through the centre 1.5" dia. plus .005", and 10,000 Spindles, 4" long and 1.5" dia minus .003" These components are case-hardened and ground. Give sketches and dimensions of the gauges you will require to examine the Discs (the hole only) and the Spindles (diameter only). State what limits of error you would allow in the gauges themselves, and as, as soon as the gauges are taken into use, they would start to wear. State what effect wear on each gauge would have on interchangeability.

*Notes.*—The Grinding Machine can work economically to within .001".



## (METROLOGY)

*Practical*

Examiners— { MR. C. R. COPELAND.  
 „ J. RIFFKIN.  
 „ H. BAZELEY, A.C.G.I., A.M.I., C.E.

*The examiners will detail the particular test or tests you are required to attempt.*

*Submit your results according to the following scheme; give neat sketches where necessary :—*

- (a) *Object of the test,*
- (b) *Apparatus used,*
- (c) *Procedure adopted,*
- (d) *Calculations,*
- (e) *Observations and deductions.*

1. 'Button' Receiver Gauge :—

Set the five 'buttons' in a circle of 4 inches diameter on the given plate in which there are five approximately located tapped holes. It is not necessary to locate the centre of the circle.

2. Position Gauge : (Plugs supplied).

Measure : (i) the distance between the centres of the holes, (ii) the angle of the line joining the centres of the holes with the base.

3. Tapered Plug Gauge :—

Measure the given tapered plug gauge at four different diameters. Illustrate graphically any variation of the generator from the straight line tangential to the two extreme measured diameters in an axial plane.

4. Position Gauge :—

Determine the diameters of the three holes in the given rectangular block. Determine also their relative positions with reference to the marked faced edges of the block, and hence find their positions relative to each other.

5. Spline Gauge :—

Measure : (i) the diameter at the top of the spline, (ii) the diameter at the bottom of the spline, (iii) the angles between the splines.

6. Angle Plate Gauge : (Plug supplied).

Measure : (i) the distance of the parallel face from the base, (ii) the angle of the inclined face, (iii) the normal distance of the centre of the hole from the inclined face.

7. Block Receiver Gauge :—

Measure : (i) the width of the narrow slots, (ii) the diameter of the hole, (iii) the relation of the centre line through the slots with the centre line of the hole.

8. (a) Concave Radius Gauge :—

Find the radius of the profile. Is the contour truly circular?

(b) Tapered Receiver Gauge :—

Measure at four different diameters.

## (CIVIL ENGINEERING)

## GEOLOGY AND MINERALOGY

Examinees— { MR A L COWLSON,  
 „ H C DASGUPTA, M.A., F.G.S

*The questions are of equal value*

## FIRST HALF

*Only FOUR questions to be answered*

1. Write notes on the choice of material for use as road metal, ballast, and building stone.
2. Show the effect of varying geological conditions upon the suitability of a site for the construction upon it of a dam, illustrating your answer by diagrams.
3. Give a classification of invertebrate fossils, with brief notes on the chief classes and orders of each phylum.
4. Compare the symmetry of the six crystallographic systems.
5. Give a brief account of the rocks in India belonging to various series and systems in the Archæan, Purana, and Dravidian groups (i.e. Archæan to Upper Carboniferous in age).

## SECOND HALF

*Only THREE questions are to be attempted*

1. (a) Explain the formation of joints and point out their importance to quarrymen  
 (b) Define the terms that are used in describing a fault. Distinguish between the different types of fault that are recognised. Illustrate your answer with suitable sketches.
2. Show how you would distinguish between—  
 (a) grit and conglomerate;  
 (b) granite and basalt;  
 (c) pyrite and chalcopyrite;  
 (d) tourmaline and garnet;  
 (e) calcite and apatite.
3. Describe the different ways in which ore deposits may occur. Name the chief ores of iron, aluminium, and copper.
4. Invent a hypothetical case to show how you will proceed to find out the apparent dip of a bed in any direction when the amount and the direction of the true dip are known.
5. Give an account of the geological action of a glacier, and mention the evidences on which you may detect the existence of a glacier in a region where it does not exist now.

## ROADS AND RAILWAYS

*(Professional)*

Examiners— { MR. T. A. GARLAND, B.Sc., A.M.I.E.  
RAI SAHIB JATINDRANATH BOSE, L.C.E.

*The questions are of equal value*

## FIRST HALF

*Answer FOUR questions only from this half*

1. You are required to make an estimate of the cost of constructing a 40 mile single line extension on a Metre Gauge Mountain Railway. The line to have a ruling gradient of 1 in 25 (compensated) and a minimum curvature of 15 degrees. You are provided with a one inch to the mile map with contours at 20 ft. intervals. Summarize the probable programme of work, both field and office, and state what assumptions you make. Explain also how the mass curve would be used to assist in selecting the most economic alignment.

2. The bearings of two consecutive lines in a Railway Traverse are  $57^{\circ} 30'$  and  $75^{\circ} 10'$  respectively. These two tangents are to be connected by a circular curve of 3 degrees and suitable transition curves. Gauge 5' 6", Speed 55 M.P.H.

Calculate—

- (a) The tangent distance for the circular curve;
- (b) The super-elevation required on the circular curve;
- (c) The length of the transition curve;
- (d) The shift of the transition curve;
- (e) The total length of the curved portion of the track.

3. You are required to erect a temporary bridge over a dry nullah bed to carry a single line track while the permanent bridge is under repair.

The maximum load is a 0-6-0 locomotive with a load of 18 tons on each of the three axles which are spaced at 6 ft. centres.

The nullah is about 50 ft. wide between the banks and the greatest depth is about 10 ft. below rail level. The material available for the temporary bridge consists of timber sleepers and 75 lbs. rails in 36 ft. lengths. The section modulus of these rails may be taken as 8.5 in inch units.

Make neat sketches, with enlarged views of details, showing how you would construct this bridge.

4. Write a brief note to define and/or explain the following: (a) Tractive effort, (b) Curve resistance, (c) Compensation of grade for curvature, (d) Coning of wheels and its effects on curved track and on straight track, (e) Resistance due to velocity.

5. Describe, with the aid of dimensioned sketches, the details of a simple turnout laid with timber sleepers and flat footed rails. Give enlarged views of the various details with the name and function of each part.

6. Sketch the following and write a brief note about each: (a) Switch diamond; (b) Spring switch; (c) Scissors crossing; (d) Single slip; (e) Double slip; (f) Diamond crossing; and explain why this type of crossing should not be flatter about 1 in 10.

## SECOND HALF

*Only FOUR questions are to be attempted, of which Question No. 3 is compulsory*

1. Define or explain the following terms:—

(a) Ruling gradient, (b) Angle of repose, (c) Coefficient of friction, (d) Super-elevation, (e) Deck girder, (f) Through girder, (g) Angle of deflection, (h)  $I^{\circ}$  Curvature, (i) Breast wall, (j) Irish bridge, (k) Weep hole, (l) Counterfort, (m) Abutment pier, (n) Surcharged retaining wall, (o) Lead, (p) Lift.

2. In a fairly level but flooded country, 401 ft. of water-way is to be provided at a certain place in the alignment of a projected railway or of a road. Explain the bases on which you would find out the most economical span or spans of the proposed waterway. No details of calculation are required.

3. Work out contractor's rate for earthwork on the following data:—

(a) Working season is for six months only, i.e. from November to April.

(b) Earthwork coolies are not locally available but have to be imported from a distance of 64 miles by rail.

(c) Soil is sandy loam.

(d) Living wage of a cooly = Rs. 5/- per diem.

(e) Two coolies can between themselves excavate and dump down 1,000 c.ft. of earth, up to 100 ft. lead, 5 ft. lift in 9 days.

(f) 5 per cent. on excavation cost to be provided for coolies' accommodation and depreciation of tools.

*N.B.*—Other rate factors to be provided according to usual practice.

4. What arrangement would you make to repair a wash-out, say, 30 ft. in a road or railway, midway between two towns or stations, 4 miles apart in a flooded country, and restore it to traffic quickly? The height of the bank and the depth of the flood are 15 and 12 ft. respectively. Current across the breach is fairly strong. The towns or stations referred to above are on high ground.

5. Make sketches of typical cross-sections (1) of a metalled hill road, half in bank and half in cutting, (2) of a macadamised road in bank in the plains of Bengal, and (3) of an important up-to-date road in the city of Calcutta with up and down tram lines at the centre, provision to be made to accommodate other up and down traffic on both sides.

6. Name the usual road metals that are generally used in Bengal, and describe the process of metalling and consolidating ordinary new roads with stone metal, noting how you would provide for efficient drainage of the road surface.

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## IRRIGATION AND SANITARY ENGINEERING

*The questions are of equal value*

Examiners—{ RAI SAHIB K. C. BANERJEE  
PROF. M. SADIQUE, B.E.

## FIRST HALF

*Not more than five questions to be attempted by any candidate*

1. What are the following and where are they used? Give neat sketches :—

Sluice valve, air valve, relief valve, manhole, gulley pit, ventilating column.

2. Explain the following terms :—

Self-cleansing velocity, dry weather flow, run off, catchment area, critical velocity in fluid motion, critical flow of ground water.

3. Describe, with neat sketches and reference letters, the essential features and action of a slow sand filter, such as may be suitable to give a daily supply of 80,000 gallons.

4. Design a septic tank to deal with domestic sewage from 10,000 people.

5. How is water wasted in a waterworks and how can the waste be effectively checked?

6. What are the aims of sewage disposal and how are they achieved?

7. A pipe line ABC consists of 3,500 ft. of 16" pipe AB and 2,500 ft. of 12" pipe BC. Find the delivery when under a pressure of 20 ft., using the following formula  $h = \frac{f l v^5}{d^{5.32}}$  and taking the value of  $f = .005$ .

## SECOND HALF

*Only four questions are to be attempted from this half*

1. What is an Anicut and what purpose does it generally serve? A stream 100 ft. wide and 10 ft. deep has a mean velocity of 4 ft. per sec. Calculate the height above the river bed to which the water would rise a short distance upstream of the anicut 12 ft. high if the coefficient of discharge of the anicut is 0.6. Neglect velocity of approach.

2. Show, by a rough plan, the positions of the following works at the head of a permanent canal which draws its supply from a river near the foot of the hills: Weir, Head Regulator, Head sluice, Escape, Divide wall, Groynes and Talus.

3. State briefly what considerations influence an engineer in selecting a suitable slope and cross-section for an irrigation canal from a silt-laden river. Explain the symbols in Chazy's formula  $V = C \sqrt{R S}$ , and use this formula with  $C = 50 \sqrt{3}$  to calculate a suitable bed slope for a canal to discharge 1,617 cu. sec. with a bed width of 70 ft. and water depth of 7 ft.

4. A canal alignment crosses a drainage torrent with bed level of the canal 1 ft. below the bed level of the torrent. What would be the most suitable type of engineering structure for passing the torrent flow across the canal, and how would you proceed to estimate the volume of flow to be provided for?



5. Describe, with sketches, the most effective protection works that you would propose for the prevention of floods in the Eastern Bengal districts.

6. Describe briefly, with neat sketches, the different classes of wells and tanks used in India for irrigation of farms. Propose an efficient plant for lifting water from a source 15 ft. below the level of the agricultural farm measuring 250 acres in area. The chief crop proposed to be grown is sugarcane.

## APPLIED MECHANICS

*The questions are of equal value*

*Not more than FOUR questions to be attempted from EACH half*

Examiners— $\left\{ \begin{array}{l} \text{MR. C. V. MILLER, A.C.D.I., D.Sc.,} \\ \text{A.M.I. STRUCT. E.} \\ \text{,, P. N. BANERJEE, M.A., A.M.I.E.} \end{array} \right.$

### FIRST HALF

1. (a) Assuming the stiffness ratio (the ratio of maximum deflection to span) of a riveted steel girder is  $\frac{1}{1800}$ , that the working stress is 7 tons per square inch and the modulus of elasticity is 13,900 tons per square inch, what is the correct ratio of depth of girder to span for uniformly distributed loading?

(b) What is the stiffness of a girder whose span is 40 feet, moment of inertia of cross-section 17,450 inch units, and modulus of elasticity 13,000 tons per square inch, when two static loads of 10 tons and 20 tons rest on it at distances of 10 feet and 30 feet from one support?

2. The platform of a bridge 140 feet span is carried by cross girders resting on the bottom booms of a pair of Warren girders so that each main girder carries half the load. The diagonal members are inclined at  $60^\circ$ . If the dead load is 1 ton per foot run of bridge and the live load (including impact) is 4 tons per foot run of bridge, find the greatest force in a diagonal member cut by a vertical plane 95 feet from the abutment, the live load being in the position which produces the greatest shear. Assume there are 7 bays in the bottom boom.

3. Deduce a general expression for the theorem of three moments on the assumption that the three supports are on different levels after the spans are loaded, that the spans are of different lengths and are covered with uniformly distributed loads of different intensities.

A continuous girder whose ends are fixed horizontally and whose supports are on the same level after loading covers three spans of 30 feet, 20 feet, and 4 feet over which there are uniformly distributed loads of 2 tons per foot run, 4 tons per foot run, and 3 tons per foot run respectively. Determine the necessary data for plotting diagrams of shearing force and bending moment. Sketch the diagrams.

4. A segmental arch of 30 feet span and 5 feet rise is hinged at the skewbacks and the crown and loaded with a single concentrated load of 15 tons at a point 5 feet from one skewback. Find the thrust, shear, and bending moment at a quarter span point in the loaded half of the span.

5. The web of a plate girder is 90 inches deep, over angles, and  $\frac{1}{8}$  of an inch thick : there are two flange plates  $17" \times \frac{1}{4}"$  and  $17" \times \frac{1}{8}"$  in section : the flange angles are  $8" \times 8" \times \frac{1}{4}"$  : the rivets are  $\frac{1}{2}"$  diameter. This web plate is to be spliced. At the splice the bending moment is 27,500 ton inches and the vertical shear is 46 tons. Assuming that the allowable bearing stress of a rivet is 12 tons per square inch, that  $\frac{1}{4}$  of the web area must resist bending, and that the pitch of the rivets used in the splice can be taken as equal to

$$\sqrt{(ft)^2 + \left(\frac{V}{h}\right)^2}$$

where  $r$  is the rivet value,  $f$  is the maximum intensity of the bending stress at the joint,  $t$  is the thickness of the web plate,  $V$  is the vertical shear at the section, and  $h$  is the depth of the web, design a suitable splice joint for the web plate and apply the usual checks.

6. The framed cantilever is attached to a wall at  $A$  and  $B$  (Fig. 1). Loads of 7 tons and 9 tons are suspended at  $C$  and  $D$  respectively. Find the magnitudes and directions of the reactions at  $A$  and  $B$  and the true deflections of the points  $C$  and  $D$  when the areas, the loads, and kinds of loads of the various members of the frame are as shown in the adjoining table :—

Member.	Size of Force.	Kind of Force.	Areas.
$BC$	6.75 tons.	Compression.	1.0 square inch.
$AC$	13.10 "	Compression.	1.50 " "
$CD$	15.60 "	Compression	2.00 " "
$BD$	17.75 "	Tension.	4.00 " "

## SECOND HALF

1. A balcony  $8' 0"$  long and  $4' 0"$  broad is supported by a pair of cast iron beams fixed to a wall at one end, the breadth of the beams being  $2\frac{1}{4}"$  and the depth near the wall  $5\frac{1}{2}"$ . What load will the balcony carry, the limiting stress on the iron being 1 ton per sq. inch? The weight of the beams may be neglected.

For uniform strength, how should the depth of the beams vary along their lengths?

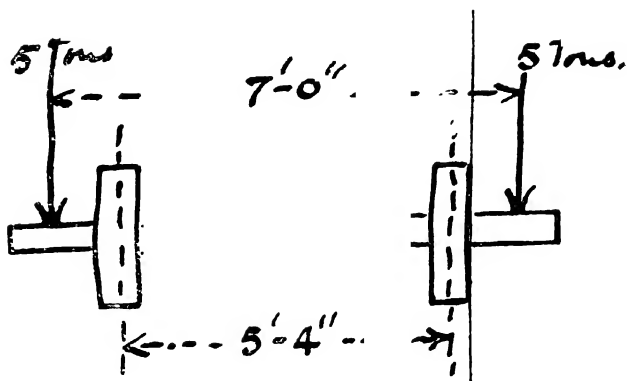
2. A beam is supported at the ends and loaded with a weight  $W$  at a point distant  $a$  and  $b$  from the supports. Show that the depression of the weight below the points of support is

$$\frac{Wab^2}{8EI(a+b)^2}$$

From above, deduce the work done in bending the beam.

3. A retaining wall  $25'$  high and  $4'$  wide at top retains earth whose angle of repose is  $30^\circ$ . The earth face is vertical and its surface at top of wall horizontal. Design the base of the wall, taking weight of masonry to be  $1\frac{1}{2}$  cwt. per c. ft. and of earth 100 lbs. per c. ft.

4. A trolley axle is loaded as shown in sketch, the distance apart of the bearings being  $7' 0"$ . Design the axle, neglecting its own weight and taking safe permissible fibre stress at 7 tons/ $\square"$ .



5. A compound stanchion 10' long consists of a  $12'' \times 5''$  I beam and two plates  $10'' \times \frac{1}{2}''$  riveted one on to each flange. The flanges and the web may be taken to be rectangular and are  $\frac{1}{2}''$  and  $\frac{1}{4}''$  thick respectively. Find what load the stanchion will carry with a factor of safety of 5 (1) if both ends are fixed, (2) if one end is free and the other fixed.

6. A R.C. slab continuous over supports placed 8' c. to c. is to carry a di-tributed load of  $1\frac{1}{2}$  cwts. per sq ft. Minimum cover for steel is to be  $\frac{1}{2}''$ . Design the slab, taking  $m=15$ ,  $f' = 600$  lbs./ $\square''$ , and  $f_t = 16,000$ / $\square''$ .

MEMBER	SIZE OF FORCE	KIND OF FORCE	AREA
BC	6.75 Tons	Compression	1.0 Sq. Ins
AC	13.10 "	Compression	1.5 " "
CD	15.60 "	Compression	2.0 " "
BD	17.75 "	Tension	4.0 " "

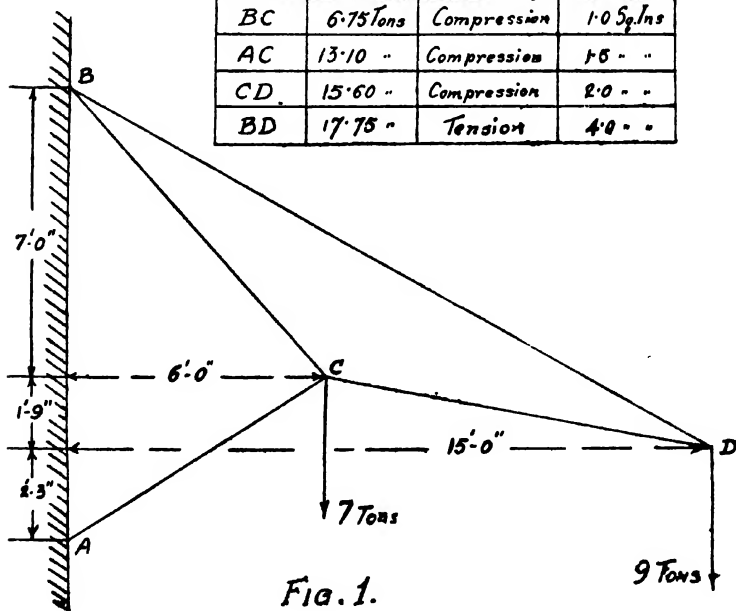


Fig. 1.

## HYDRAULICS

*The questions are of equal value**Not more than FOUR questions to be attempted from EACH half*

Examiners—{ Mr. C. V. MILLER, A.C.G.I., B.Sc.,  
 A.M.I. STRUCT. E.  
 „ R. WOLFENDEN, M.B.E., M.Sc.,  
 M.I.MECH.E, M.I.E. (IND.), BARRISTER-  
 AT-LAW.

## FIRST HALF

1. (a) A small brass cylinder of uniform diameter, fitted with a non-return valve, is used as a depth gauge in sounding. If after a sounding the top of the cylinder is unscrewed and the water entrapped is found to fill five-eighths of the cylinder, what is the depth of sounding?

(b) Water flows from a tank at the rate of 500 gallons per minute into a horizontal pipe 6 inches in diameter. The pipe suddenly changes at a socket to 9 inches in diameter and is then suddenly reduced back to 6 inches diameter. Find the loss of head due to enlargement and contraction. Assume  $C_c = 0.64$ .

2. A district has a drainage area of 2,000 acres with a population of 25 persons per acre. The daily water supply to the district is equal to 30 gallons per head. During dry weather it is found that, as a maximum value, 10 per cent. of the daily dry weather flow passes along the sewer in one hour at a certain time each day. The maximum rainfall is 6 inches in 24 hours over the whole area: determine the diameter of a circular sewer, having a slope of 1 in 2,500, which will take the maximum dry weather flow and the rainfall together without the sewer becoming more than half full. Assume  $C = 100$ .

Deduce the formula for the depth of water in a circular conduit for maximum discharge.

3. (a) Find the length of the sill of a waste weir for a tank receiving drainage from a catchment area of 20 square miles, assuming that 75% of the rain reaches the tank and that the rate of rainfall per day is 8 inches, so that the water shall never rise more than 3 feet above the sill.

(b) Find the dimensions of a trapezoidal earth channel of the most economical form to convey 600 cusecs with a fall of 2 feet per mile and side-slopes  $1\frac{1}{2}$  feet horizontal to 1 foot vertical. Take  $C = 95$ .

4. A reservoir has sides sloping 1 foot vertically to  $1\frac{1}{2}$  feet horizontally and the water is 27 feet deep. Any horizontal section of the reservoir is rectangular, the bottom being 37 feet wide and 57 feet long. Determine the time of emptying the reservoir through a short pipe 15.3 inches in diameter into a second reservoir the level of the water in which is constant and 9 feet below the bottom of the upper reservoir, assuming the coefficient of discharge is 0.75.

5. A fire engine supplies water at a pressure of 50 lbs. per square inch by gauge at a velocity of 6 feet per second into a pipe 3 inches in diameter. The pipe is led a distance of 100 feet to a nozzle 25 feet above the pump. If the coefficient of friction in the pipe is 0.02 and the actual lift of the jet is 0.6 of that due to the velocity of efflux, find the actual height to which the jet will rise and the diameter of the nozzle to satisfy the conditions of the problem.

6. A set of pumping engines has to deliver twenty million gallons of water per day of 24 hours through a 48 inch diameter pipe 16 miles long with a total lift of 237 feet. Assuming the coefficient of friction of the pipe is 0.008, what is the effective horse-power necessary?

## SECOND HALF

1. Explain, with sketches, the details and uses of the following types of centrifugal pumps :—

(a) Turbine Pump.

(b) Multi-stage Pump.

What is a 'Booster Pump' and when is it used? What are 'characteristic curves' for pumps and what are the uses of these curves?

2. Explain the reasons for placing air vessels on the suction and delivery pipes of a reciprocating pump.

What is meant by 'slip' in a pump? What is 'negative slip' due to?

A single acting pump has a bore of 6 inches and a stroke of 12 inches. Speed 40 revs. per minute. The actual discharge is 45 gallons per minute. Diameter of delivery pipe 4", length 60 feet.

Find the 'slip' and the acceleration head at the beginning of the stroke if no air vessel is fitted.

3. A jet of water having a velocity of 24 feet per sec. strikes a vane which is moving with a velocity of 12 feet per sec. The vane is moving in a direction making 30° with the direction of the jet. Design the vane so that the water may come on to it tangentially and leave it in a direction perpendicular to the direction of motion of the vane. Determine the pressure on the vane in the direction of motion per lb. of water striking the vane.

4. What is meant by the term 'specific speed' applied to a water turbine? Establish a formula for the 'specific speed' of a water turbine.

Explain how the 'specific speed' is used in determining the type of turbine to be adopted.

5. Describe, with sketches, a form of governor for regulating the speed of a large hydraulic turbine.

6. Describe, with sketches, the construction of one form of water meter suitable for measuring small quantities of water supplied at irregular intervals such as occur in a house supply.

## MECHANICAL ENGINEERING

*The questions are of equal value*

*Not more than THREE questions to be answered from EACH half*

Examiners—{MR. P. C. GANGULY, B.Sc., (GLAS.), B.E.S.  
MR. N. COOKE, B.Sc.

## FIRST HALF

1. A mechanism for recording the distance travelled by a bicycle is as follows: There is a fixed annular wheel *A* of 22 teeth and another annular wheel *B* of 23 teeth, which revolve closely on the axis of *A*. An arm driven by the bicycle wheel, also, revolves freely on the axis of *A* and carries on a pin at its extremity two wheels *C* and *D* which are attached to each other. The wheel *C*, with 19 teeth, meshes with *A* and the wheel *D*, with 20 teeth, meshes with *B*. The diameter of the bicycle wheel is 28 in. What must be the velocity ratio between the bicycle wheel and the arm? *B* makes one revolution for 1 mile covered? The wheel *A* is locked to the frame of the bicycle.

2. A Watt's parallel motion has two bars  $OA$  and  $O_1B$  joined by a coupling bar  $AB$ . When the mechanism is in its mean position the links  $OA$  and  $O_1B$  are perpendicular to  $AB$ . If  $OA=3$  ins.,  $O_1B=5$  ins., and  $AB=4$  ins., find the position of the tracing point  $P$  and the ratio in which it divides  $AB$ .

3. In a Hartnell's governor the ball radius is 6 in. when the ball arm, which has a length of 5 in., is vertical, and the governor is running at the mean speed of 300 r.p.m. The sleeve arm has a length of  $4\frac{1}{2}$  ins. and the balls weigh 5 lbs each. The sleeve can move 1 in from its mean position either up or down, and the maximum steam supply is obtained when the speed falls 4 per cent. below the mean. Neglecting friction, find—

(1) the stiffness of the spring,

(2) the maximum speed of the governor.

4. A pair of wheels have 25 and 130 cycloidal teeth respectively. Find the addendum of each wheel that the arcs of approach and recess, may each be equal to the pitch ( $p$ ), the flanks being radial. Prove any formula that you may use.

5. What width of leather belt would be required to transmit 25 H.P. under the following conditions?—

Diameter of pulley = 27 ins.

R.P.M. = 13.

$\mu = 0.18$ .

Angle of lap =  $210^\circ$ .

Maximum tension of belt per inch of width = 120 lbs.

Prove any formula you may use.

## SECOND HALF

1. A horizontal central section through a crane-hook is a symmetrical trapezium 3" deep,  $2\frac{1}{4}$ " wide at the inner face, and 1" wide at the outer face. The radius of curvature of the inner face is  $2\frac{1}{2}$ " and the line of load is  $2\frac{1}{4}$ " from this face.

Given that the distance of the neutral plane from the centroid of the section =  $h = 0.185$ ", determine the safe load that the hook will carry if the maximum safe stress in either tension or compression is 7 tons/in.<sup>2</sup>.

2. A hollow tube, 3" outside diameter by 2" inside diameter, is simply supported at 5 feet centres and is loaded with 300 lbs. at a point 2 feet from one support.

• Determine the central deflection due to bending and shear.

At what point is the total deflection a maximum?

•  $E = 28 \times 10^6$  lbs./in.<sup>2</sup>.

$G = 11 \times 10^6$  lbs./in.<sup>2</sup>.

3. A countershaft  $2\frac{1}{2}$ " diameter and 2' 6" between bearing centres is loaded with total belt pulls of 1,000 lbs. and 2,000 lbs. respectively, in planes at right angles to each other. 1 foot apart and symmetrical about the centre of the shaft. 15 H.P. at 200 r.p.m. is transmitted between the two belt pulley centres.

Calculate the maximum intensity of shearing stress in the shaft. Neglect shear due to bending.

4. The subjoined table gives the load extension values for a mild steel test-piece 0.798" diameter and 8" between gauge-points. Draw separately the load extension curves for the elastic and plastic parts of the range. Determine the Modulus of Elasticity, the Yield-point, the Ultimate Tensile Stress, the

Percentage Elongation, and the Work done to rupture. Given that the elongation of a test-piece of the same material  $1\frac{1}{2}$ " diameter and 6" between gauge-points was 31.6%, what percentage elongation would you expect in a test-piece 0.875" diameter and 4" between gauge points?—

Load (Tons)	...	...	3	6	9	9.5	10	11
Extn. (Ins.)	...	...	0.0036	0.0078	0.0111	0.0117	0.12	0.17
Load (Tons)	...	...	11.5	12	12.5	13	13.5	14.0
Extn. (Ins.)	...	...	0.2	0.24	0.29	0.34	0.40	0.51
Load (Tons)	..	...	14.5	15	15.8	15.1	13.8	13.1
Extn. (Ins.)	...	...	0.62	0.82	1.62	1.62	1.75	1.79

## ELECTRICAL ENGINEERING

*The questions are of equal value*

*Not more than FOUR questions to be answered from EACH half*

Examiners— { MR. A. C. BANERJEE.  
MR. J. D. CHAUDHURY.

### FIRST HALF

1. Explain the principle and method of use of any device you know of for synchronizing an alternator about to be switched into parallel operation with a machine already running.

Deduce Teichmüller's expression to determine the sensitivity of the method described.

2. A 15 K.V.A. transformer on open circuit test is found to absorb 300 watts at its full P. D. of 2,000 volts and 90 watts at 1,000 volts with the same periodicity. On short-circuit test with 15 amps in the primary winding it absorbs 1,500 watts. Find approximately the losses due to hysteresis and to eddy currents and the overall efficiency when delivering full load current at full P. D. to a circuit whose P. F. is .85.

3. A shunt dynamo when operated as a generator at 1,400 r.p.m. delivers 100 amperes armature current at a terminal voltage of 220. The resistance of the armature is .04 ohm. Calculate the speed at which the armature rotates if operated as a motor, the armature current and the field excitation being the same as in the generator.

4. What is the 'Power-Factor' of an A.O. load? Prove that under certain conditions it is equal to the cosine of the angle of lag.

Two motors having the same efficiency and giving the same B. H. P. are supplied from the same mains, the power-factor of one is unity but that of the others is .7. Find the power-factor of joint load.

5. What are the advantages of series parallel control over the rheostatic control?

From a key diagram develop the wiring diagram of a D.C. tram controller.

6. A 3-wire feeder is transmitting 120 amp. in the positive main and 10 amp. in the negative. The terminal voltage at the central station is 460 volts and at the feeding point  $2 \times 225$  volts.

- (a) Calculate the power lost and efficiency of transmission.
- (b) Find the resistance of a 2-wire feeder to transmit the same power the same distance with the same efficiency and 225 volts at the feeding point.

### SECOND HALF

1. (a) What is the electrical *efficiency* of D. C. motor, and how would you express it simply, in terms of the supply voltage? Prove graphically or otherwise—

- (1) that when the motor utilizes nearly all the energy that flows into it, the armature current is reduced to a minimum;
- and (2) that the maximum nett output of the motor corresponds to an efficiency of 50 per cent.

(b) A four-pole D C generator has a total of 360 conductors on its armature and is designed to have a total of  $20 \times 10^6$  lines of magnetic flux crossing its air-gap with normal excitation. What voltage will be generated in the machine at a speed of 1,000 r.p.m ?

2 (a) Explain, by means of a diagram, the *principle* of Morse Duplex Telegraph working by the 'differential' method. Trace the path of the *working* current at either end when the sending keys at the terminal stations are both down.

(b) In a Duplex Telegraph system with primary batteries, mention *briefly* the essential conditions for *each* indoor apparatus and for outdoor live wire, without which efficient working cannot be secured. How can you carry on work on one of two live wires in metallic contact?

3 (a) Explain, by a diagram of alternator characteristics, the simplest method of determining the 'synchronous impedance' of an alternative armature under working conditions.

(b) A single-phase alternator has an armature resistance of 0.1 ohm. When excited to give 50 volts and then short-circuited, the short-circuit current is 200 amperes. To what approximate induced voltage must the alternator be excited if it is to deliver 100 amperes at a power-factor of 0.8 lagging, with a terminal voltage of 200?

(The corresponding vector diagram is to be given.)

4. Write a short essay, with diagrams, on the different methods of cooling transformers, dealing also with the necessity for such cooling process.

5. A choking coil with an inductance of 0.4 henry is in series with a capacity of 25 microfarads. When a voltage of 220 is applied and the frequency is adjusted to resonance, the current measures 50 amperes. Find (1) the frequency, (2) the resistance of the choking coil, and (3) the voltage across the choking coil.

6. (a) How does an induction motor differ from an ordinary motor? What do you understand by the term 'fractional slip' of an induction motor? Prove that the 'fractional slip' is a function of the rotor copper loss.

(b) Each branch of a *star-connected* load takes 2.5 K. W. at 115 volts and 0.8 power-factor leading. Find the P. D. between the supply mains and the current in each branch.



## PRINCIPLES OF ARCHITECTURAL DESIGN

*The figures in the margin indicate full marks*

Examiners— { MR. PULINBIHARI GHOSH, B. E.  
RAI BAHADUR A. N. MITRA.

## FIRST HALF

1. Make neat, free-hand sketches to an approximate scale of *any two* of the following :— 20

- (a) A column in Indian style with bracket capital suitable for a verandah.
- (b) A cornice for a building 50 feet high in Renaissance style.
- (c) Different types of Roman walling.
- (d) An entablature of composite order.

2. Draw to a suitable scale the plan, elevation, and section of a window with balcony in Indian style. The opening of the window is 7 feet by 4 feet. 30

Or,

Draw a typical sketch plan of each of Early Christian and Byzantine churches, and write a comparative note on them with regard to the following : (a) Openings, (b) Columns, (c) Roofs.

3. Design an entrance porch to a building in Gothic style. Height of plinth of the building is 2 feet and the main entrance opening is 8 feet wide and 15 feet high to the crown of the arch. 50

Neat pencil sketches to an approximate scale of the following should be attempted by the candidates :—

- (a) Plan, (b) Front elevation, (c) Side elevation.

Or,

Write a comparative note on Gothic and Renaissance styles of architecture, illustrating with sketches the architectural character of each.

## SECOND HALF

*Answer Question 3 and ANY ONE of the other three*

1. Design a Gateway, for the compound of an important Public Building, with wrought iron gate, 10' opening between stone pillars, with wrought iron railing on either side fixed on top of cement concrete plinth, total height of railing including plinth being 7' 0". Draw plan and elevation to scale, and give necessary dimensions. 50

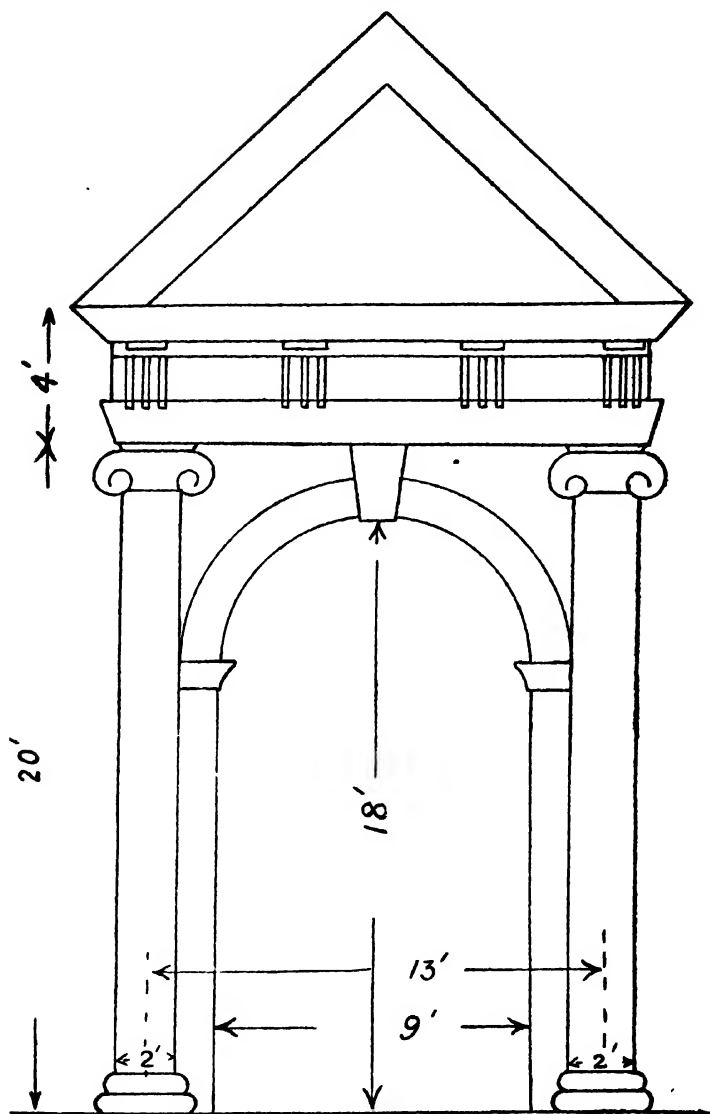
2. Draw a dome of catenary shape, 70' diameter at base, half in elevation and half in section, with lantern and gallery at top, and scrolls and gallery at base. The details of the inside of the dome should be clearly shown in the section. 50

3. The accompanying rough sketch (Fig. 1) shows a semicircular headed opening with engaged Ionic Columns and an entablature with a pediment. Revise the elevation of the above to a scale of 2 feet = 1 inch, and supply necessary details of mouldings without altering the main dimensions noted on the sketch. 50

4. Design a pavilion for a public park in Indo-Saracenic style, inside dimension 32' x 16', having the following :— 50

- (a) Three arch openings with square piers in the central portion of each of the long sides;
- (b) One arch opening in each of the short sides;
- (c) Railings in all the arch openings, except the central one in each of the long sides.

Introduce reinforced concrete work wherever suitable.

*Fig. 1.*

## (MECHANICAL ENGINEERING)

## HYDRAULICS AND HYDRAULIC MACHINERY

*The questions are of equal value**Attempt THREE questions from EACH half*

Examiners— $\left\{ \begin{array}{l} \text{MR. J. RIFFKIN} \\ \text{,, P. C. GANGULY, B.Sc. (GLAS.)} \\ \text{,, J. TULLIS} \end{array} \right.$

## FIRST HALF

1. A 10" diameter pipe line  $AB$  leads from a reservoir  $A$  to a position  $B$ , 9 miles distant. The levels of the pipe at  $A$  and  $B$ , above Ordnance Datum, are respectively 420 feet and 274 feet. If the reservoir level at  $A$  is 30 feet above the pipe centre line, and the discharge at  $B$  is free, calculate the flow in the pipe.

To increase the delivery by 25% an additional 8" diameter pipe is to be laid from a position  $C$  on the pipe line to  $B$ . Find the position of this junction point  $C$ , and, with the two pipes fitted, estimate the pressure head at  $C$ .

Take  $f=0.008$ .

2. Define the terms 'unit speed,' 'specific speed,' and 'unit power,' and explain their utility in hydraulic engineering.

Deduce an expression for the specific speed of a turbine.

Describe clearly the method of preparing, and explain the use of, the characteristic diagram for a particular turbine, the co-ordinates being 'unit speed' and 'unit power.'

3. Find the depth of flow in a circular channel ( $a$ ) when the velocity is a maximum, ( $b$ ) when the discharge is a maximum.

A district has a drainage area of 2,500 acres with a population of 20 persons per acre. The daily water supply to the district is equal to 40 gallons per head. During dry weather it is found that 7% of the daily dry weather flow passes along the sewer between the hours of 12 noon and 1 P.M. Assuming a maximum rainfall of 4 inches in 24 hours over the whole area, determine the diameter of a circular sewer, having a slope of 1 in 3,600 which will take the maximum dry weather flow and the rainfall without the sewer becoming more than half full. Take  $C=130$ ; 1 acre=4,840 square yards.

4. An experimental centrifugal pump, outer diameter 2 feet, delivers 8.5 ft<sup>3</sup>/sec of water against a head of 30 feet when running at 426 R.P.M. and absorbing 516 H.P.

Estimate the proper speed, power required, and delivery, of a similar pump, of which this is a scale model,  $\frac{1}{3}$  size, when the head pumped against is 60 feet.

Prove any formula used. Neglect viscosity.

## SECOND HALF

1. A reaction turbine is coupled to an electric dynamo. Describe how you would carry out a series of efficiency tests.

2. In an inward flow turbine the pressure head available at entrance is 56 feet of water. The water enters the inlet circumference of the wheel which is 2 feet in diameter at 10° to the tangent to the circumference. The outlet diameter of the wheel is 1 foot and the radial velocity of exit is 5 feet per sec.

The speed of the turbine is 950 R.P.M. Design the vane at the inlet and outlet edges.

3. Assuming a pipe of length= $L$  feet, diameter= $D$  feet, fitted with a nozzle of diameter= $d$  feet through which water is discharged. The level of the water is= $H$  feet above the centre of the nozzle,

Show that for maximum kinetic energy, the head lost in friction= $H/3$ .

4. A centrifugal pump whose impeller is 1 foot diameter at inlet, 2 feet diameter at outlet, 6 ins broad at inlet, and 4 ins. broad at outlet, discharges 300 cu. ft. per min. when running at 200 R.P.M. The outlet vane angle is  $25^\circ$ . Determine the rise of pressure as the water passes through the impeller.

## THEORY OF MACHINES

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

Examiners—{ MR. P. C. GANGULY, B.SC. (GLAS.)  
 ,, R. WOLFENDEN, M.B.E., M.SC., M.I.MECH.  
 E., M.I.E.(IND.), BARRISTER-AT-LAW.

### FIRST HALF

1. Find the kinematic condition that must be satisfied by the profiles of a pair of teeth of two wheels in gear so as to transmit a constant velocity ratio. Find also an expression for the sliding velocity between the teeth. What are the different kinds of profiles used in practice? Discuss their relative merits.

2. Prove the formulæ for the addenda of involute and cycloidal teeth in terms of arcs of approach and recess, and also find the least number of teeth for the two kinds of wheels.

3. Find an analytical expression for the equivalent eccentric for a Stephenson link motion, and prove that Macfarlane Gray's construction for finding the equivalent eccentric is correct.

4. Calculate the maximum horse-power that can be transmitted by a wire rope consisting of 42 wires of 0.64 inch diameter from the given data:—

Angle of lap= $180^\circ$ .

Coefficient of friction= $0.25$ .

Weight of rope per foot of length= $0.56$  lb.

The safe working stress is  $24,000$  lbs. per sq. inch.

$E=29 \times 10^6$  lbs. per sq. inch.

Diameter of pulley= $5$  feet.

5. In an Allan straight link motion find the proportions of the arms of the weigh bar shaft so that the lead may remain constant for any given setting of the gear.

6. With reference to a flywheel define (a) coefficient of fluctuation of speed, (b) coefficient of fluctuation of energy.

A flywheel weighs 6 tons and has a radius of gyration of 6.5 feet. It is at the end of a shaft 45 feet long and 6 inches diameter. The modulus of rigidity of material of the shaft is  $12 \times 10^6$  lbs. per sq. inch; find the natural period of torsional vibration of the system, neglecting the inertia of the shaft itself.

## SECOND HALF

1. A cage weighing 6,000 lbs. worked from a drum 5 feet diameter whose radius of gyration is 30 inches. Weight of drum 4,000 lbs. The motor supplies a constant torque of 18,000 lbs. feet. Find the acceleration of the cage, the time to raise it 50 feet, and the tension in the rope.

2. The rotor of a marine steam turbine weighs 4 tons and has a radius of gyration of 18 inches. Revolutions per minute 750. Speed of vessel 35 knots when moving in a circle of 1,200 feet radius. Find the torque on the bearings. Prove the formula you use.

(1 knot is equal to 1.7 ft. per sec.)

3. Sketch a Mitchell Thrust Block and describe the essential features on which its operation depends.

4. Explain what is meant by the 'whirling speed' of a shaft. Obtain an expression for the frequency of the transverse vibrations in the case of a simply supported shaft uniformly loaded. It is commonly assumed that the critical speed in revs. per minute is given by the formula

$$C = \frac{385000}{\sqrt{\text{maximum static deflection}}}$$

Obtain  $C$  for a uniformly loaded shaft.

5. Find the greatest and least values of the velocity ratio of two shafts connected by a Hooke's joint, the angle between the axes of the shafts being  $45^\circ$ . Draw a polar diagram, showing the velocity ratio for different values of the angle turned through by one of the shafts.

6. Distinguish clearly between 'Primary' and 'Secondary' balancing. The cylinders of a 4 cylinder vertical marine engine are equidistant. The reciprocating masses of each of the two middle cylinders weigh 1 ton. The cranks for these are set at an angle of 100 degrees. Find the angles of the outside cranks and the weight of the reciprocating parts driven by each of the outside cranks so that the engine shall be in balance for primary forces and couples.

## HEAT ENGINES

*The questions are of equal value*

*Attempt THREE questions only from EACH half*

*Steam Tables and Charts are supplied*

Examiners— $\left\{ \begin{array}{l} \text{MR. J. RIFFKIN} \\ \text{,, P. C. GANGULY, B.Sc. (GLAS.)} \\ \text{,, A. BRAMBLE, B.Sc.} \end{array} \right.$

## FIRST HALF

1. A convergent divergent nozzle is supplied with dry saturated steam at 180 lbs./in.<sup>2</sup> abs. Calculate the necessary throat area for a flow of 8 lbs./sec. Assume that expansion takes place under thermal equilibrium, and is frictionless and adiabatic.

Estimate, under similar pressure conditions, the discharge from the same nozzle if the steam is supersaturated at exit. Use Callendar's equation for specific volume,

$$V = \frac{2.2436}{p} (H - 464) + 0.0128,$$

and take  $pV^{1.3} = C$  and the critical pressure ratio as

$$r = \left( \frac{2}{n+1} \right)^{\frac{n}{n-1}}.$$

2. An internal combustion engine works on the following cycle :—

- (1) Adiabatic compression; ratio of initial to final volume, 12; initial pressure, 14.5 lbs./in.<sup>2</sup> abs.; initial temperature, 85°C.
- (2) Addition of heat at constant volume until the pressure is 1.3 × pressure at the end of compression.
- (3) Addition of heat at constant pressure until the volume is 1.2 × clearance volume.
- (4) Adiabatic expansion to the original volume.
- (5) Rejection of heat at constant volume to the initial pressure.

Determine (a) the temperature at the end of operations 2, 3, and 4; (b) the ideal thermal efficiency. Assume  $\gamma = 1.38$ , and  $R = 96$ .

3. Describe, with the aid of sketches, the processes of reheating and of feed heating by 'bleeding' in a steam plant.

A turbine plant works between pressures of 200 lbs./in.<sup>2</sup> and 1 lb./in.<sup>2</sup> abs. with steam initially dry and saturated. For feed heating purposes steam is bled from the turbine at a pressure of 75 lbs./in.<sup>2</sup> and arranged counter-current with the feed water. Calculate the theoretical weight of steam to be bled per lb. of feed, and find the thermal efficiency of the cycle of operations.

4. Enumerate the conditions which should be fulfilled by the working substance of a vapour compression refrigerator, and state how far  $\text{NH}_3$  and  $\text{CO}_2$  conform to those conditions.

Sketch  $P-V$ ,  $T-\phi$  and  $H-\phi$  diagrams for a  $\text{CO}_2$  plant in which the vapour is superheated at the end of compression and then undercooled before passing through the regulating valve, and show how you would calculate the coefficient of performance of the plant.

How would you expect the actual coefficient of performance to compare with the ideal value?

## SECOND HALF

1. In a recently installed turbine-driven air compressor the speed of the compressor is 250 r.p.m. and the stroke is 17 inches. The compressor is of the vertical double-acting, two-stage type, with an inter-stage tubular cooler. At the above given speed, the compressor is rated to take in 4,000 ft.<sup>3</sup> of 'free-air' per minute and to deliver at 80 lbs./ins.<sup>2</sup> gauge.

Assuming that both compressions follow the curve  $pV^{1.3} = \text{constant}$  and that the air is initially at 27°C. and 15 lbs./in.<sup>2</sup> absolute, find—

- (a) suitable cylinder dimensions for this compressor;
- (b) the H.P. required at crank-shaft of compressor, when the mechanical efficiency of the machine is 86 per cent.

Explain clearly any other assumptions which you make for the purpose of your calculation.

2. State the principle of the regenerator as applied to a hot-air engine. Shew, with the aid of  $P.V.$  and  $T.\phi$  diagrams, that, between the same temperature limits, the heat converted into work is the same in the constant volume and constant pressure cycles, respectively, as in the Carnot cycle. State the reasons why large size hot-air engines are not adopted in practice.

3 The following data refer to a stage of a pressure compound'd, impulse steam-turbine :—

Mean dia. over blades	...	39 inches
Speed	...	3,000 r.p.m.
Ratio of blade veloc. to jet veloc.	...	0.322
Nozzle efficiency	...	92 per cent.
Losses due to disc and vane friction together	2.5 per cent of stage heat-drop.	

Entrance angle of blades ... 29°

Exit " " " ... 25°

The veloc. coefficient of blades may be taken at 0.78.

Draw the veloc. diagram and calculate—

- work done on blading per lb. of steam,
- the stage-efficiency,
- the carry-over to next stage nozzles.

4. The following particulars refer to a return-tube marine-boiler installation :—

Temp. in uptakes	...	480° F.
" " stroke-hold	...	100° F.
Cal. value of coal used	...	13,000 B.Th. U./lb.
Coal per ft. <sup>2</sup> of grate area	...	20 lbs./hour.
Air per lb. of coal	...	23 lbs.

The proportions of the restricted areas through the boiler are :—

Over bridge	...	0.2 of grate area.
Through the tubes	...	0.17 " " "
" uptakes	...	0.14 " " "
" funnel	...	0.12 " " "

Of the total heat of combustion of the fuel, 85 per cent. is liberated in the furnace, and the remaining 15 per cent. in the combustion chamber. Heat is transmitted to the water in the boiler in the following manner :—

Heat transmitted from furnace = 4,675 B.Th.U. per lb. of coal.

Heat transmitted by tubes = 4,675 B.Th.U. per lb. of coal

Heat transmitted by combustion chamber = 2,340 B.Th.U. per lb. of coal.

Assume that the whole of the fuel is burnt to gas and that specific heat of air and gases is 0.25. Take specific volume of air and gases in ft.<sup>3</sup> per lb., as  $v = T/40$ , where  $T$  is temp. in °F. absolute.

Calculate values for the following :—

- The furnace temperature.
- The temperature of gases in combustion chamber.
- The veloc. of the gases as they enter the tubes from the combustion chamber.

## MACHINE AND ENGINE DESIGN

*The figures in the margin indicate full marks*

*The First Half must first be attempted, and then ANY TWO  
questions from the Second Half*

*The sketches accompanying the solutions to the Second Half must be free-hand  
sketches, drawn approximately to scale, and properly dimensioned*

Examiners—{ Mr. J. RIFFKIN.  
                  ,, C. R. COPELAND.  
                  ,, J. W. GAUNT.

## FIRST HALF

The accompanying figure shows a C.I. hydraulic cylinder for a pressure 100 intensifier. The maximum pressure in this cylinder is 900 lbs./in.<sup>2</sup>, the return stroke being obtained by 'exhausting' the water pressure in the cover end of the cylinder, the full pressure being *always* maintained in the  $\frac{1}{8}$ " annular space round the piston.

Make separate dimensioned designs, showing all diameters, etc., for the cylinder and for the C.I. packing gland—which is to take 6 turns of  $\frac{1}{8}$ " packing—allowing the following stresses:—

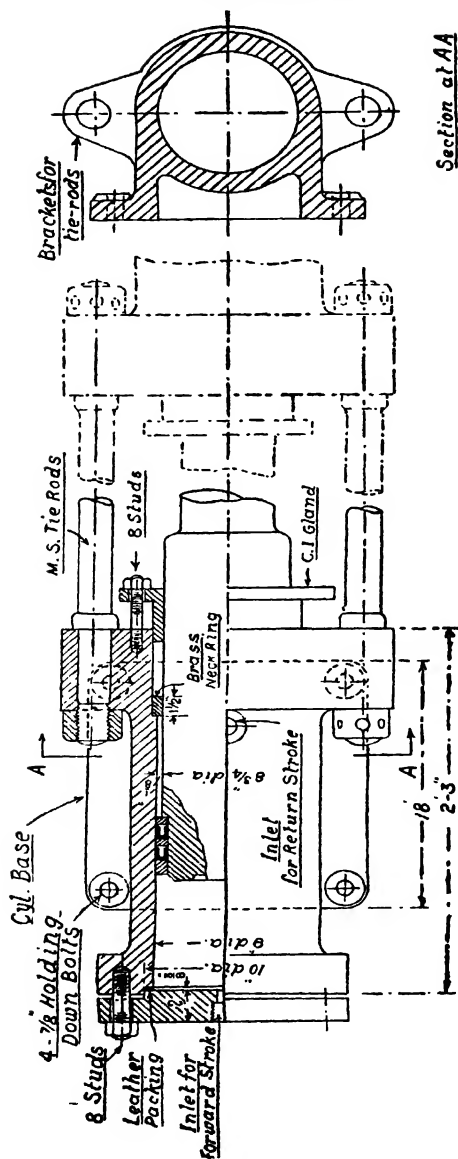
Tensile stress in M.S. = 10,000 lbs./in.<sup>2</sup>

" " " C.I. = 3,000 " "

Table of load for studs:—

Dis. of stud	$\frac{3}{4}$ "	$\frac{7}{8}$ "	1"	1 $\frac{1}{8}$ "	1 $\frac{1}{4}$ "	1 $\frac{3}{8}$ "
Load lb	2,000	2,900	4,200	5,700	7,700	9,400





## SECOND HALF

Only two questions to be attempted

1. A lever for equalising the loads on the springs of a locomotive is shown in Fig. 1, the load applied by the springs at each end of the lever  $4\frac{1}{2}$  tons. Design the lever, and also the cast steel bracket which connects it to the frame on the lines shown in the Fig., assuming the allowable stresses to be as follows :— 50

Tension : 8,000 lbs./in.  $\square$

Shear : 5,000 lbs./in.  $\square$

Bearing on fulcrum pin : 2,000 lbs./in.  $\square$

2. A direct-acting pumping engine is fitted with a combined pump and piston rod as shown in Fig. 2. The rod is subjected to a load of 30 tons, alternately in tension and compression. Design the rod and a sleeve and 50

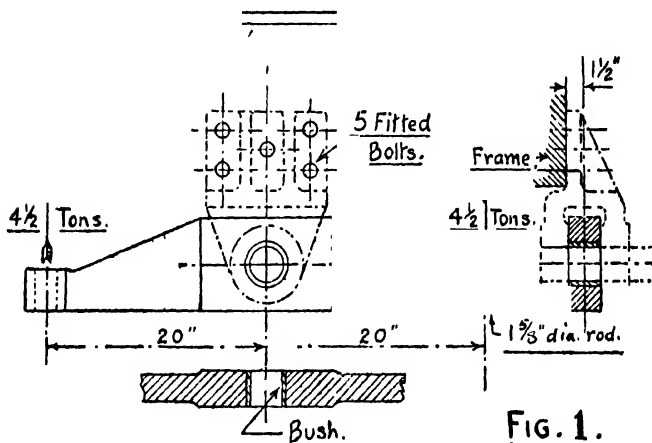


FIG. 1.

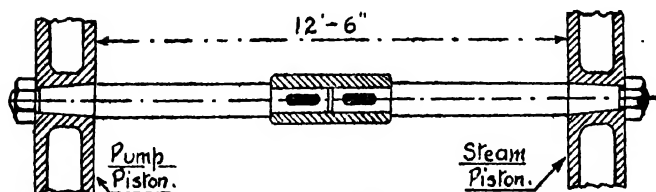


FIG. 2.

cottered joint for connecting the two halves of the rod for the following conditions :—

Maximum allowable stresses :—

Tensile in screwed ends and across cotter holes	4 tons/in. □
Shear on cotters	3 " "
Crushing stress on cotters and shoulders of rods	7 " "

The diameter of the rod to be such that, when tested by Rankine's formula, the buckling load is not less than 70 tons.

$$\text{Buckling load } P \text{ (tons)} = \frac{21.1}{1 + \frac{7500k^2}{l^2}}$$

(The stuffing box packings are of the freely floating type and have no effect upon the resistance of the rods to buckling.)

3. The steam and pump cylinders of a horizontal pumping engine are held together by 4 tie rods. The ends of these rods are attached to cast iron crossheads carried on brackets cast integral with the pump and steam ends. One of the crossheads and two rods are shown in Fig. 3. Design and make dimensioned sketches of the crosshead when the tensile stress due to bending is 3,000 lbs./in. □. Calculate the shearing and crushing stresses on the shear peg.

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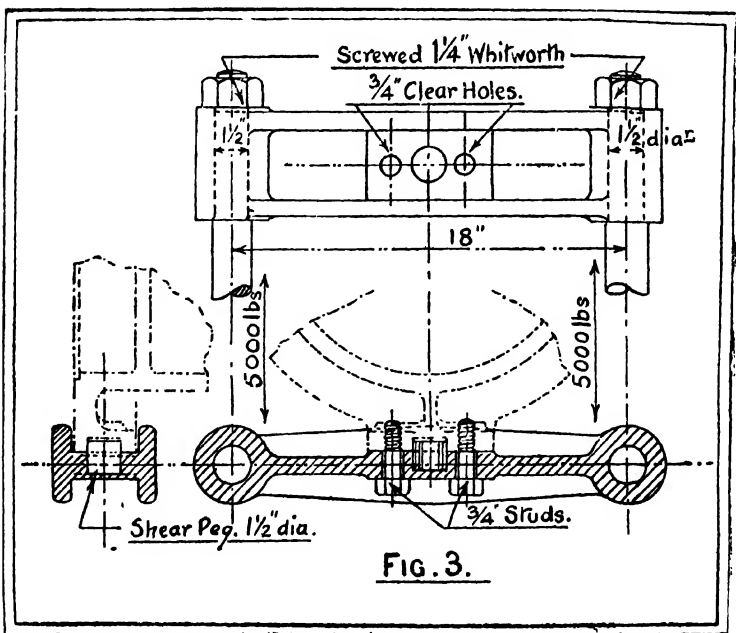


FIG. 3.

4. A marine boiler, 16' 0" dia., working steam pressure 200 lbs./in.  $\square$ , is to be fitted with a treble riveted double butt strap longitudinal joint, the alternate rivets in the outer rows being omitted. Calculate the thickness of plate  $t$  for a minimum joint efficiency of 80%. Find the diameter of the rivets, and design the joint completely, the maximum allowable pitch (which need not be fully worked up to) being  $6t + 1\frac{1}{2}$ ". Calculate the percentage strength of the joint for all possible methods of failure. Make a fully dimensioned sketch, showing the overall widths (equal for both straps) and the thickness of the butt straps.

Shear stress for rivets :  $5\frac{1}{2}$  tons/in.  $\square$ .

Tensile stress for plate and straps :  $7\frac{1}{2}$  tons/in.  $\square$ .

## STRENGTH AND ELASTICITY OF MATERIALS

*The questions are of equal value*

*Not more than THREE questions to be attempted from EACH half*

Examiners— $\left\{ \begin{array}{l} \text{MR. P. C. GANGULY, B.Sc. (GLAS.)} \\ \text{,, R. WOLFENDEN, M.B.E., M.Sc., M.I.MECH.} \\ \text{E., M.I.E. (IND.), BARRISTER-AT-LAW.} \end{array} \right.$

### FIRST HALF

1. Prove that the moment of resistance  $M$  of a curved beam of initial radius  $R_1$ , when bent to a radius  $R_2$  by a uniform bending moment, may be expressed by

$$M = EA h^2 \left( \frac{1}{R_2} - \frac{1}{R_1} \right),$$

where

$$Ah^2 = \int \frac{R_1 y^2}{R_1 + y} dA$$

and  $y$  is the distance of any point in the cross-section  $A$  from the plane passing through the centre of the figure and perpendicular to the plane of bending. Develop the above expression and hence deduce formulæ which may be applied to the design of crane hooks.

2. A long straight tube, 3 ins. internal diameter and  $\frac{1}{4}$  inch thick, is subjected to an internal pressure of 600 lbs./in.<sup>2</sup>. Consider it as a thin cylinder, and find the longitudinal and circumferential stresses.

If the tube be then subjected to a twisting moment of 700 in. lb., find the factor of safety according to each of the three recognised theories of elastic failure. Assume that the elastic limit tensile stress = 18 lbs./in.<sup>2</sup>. Poisson's ratio = 0.30.  $E = 30 \times 10^6$  lbs./in.<sup>2</sup>.

3. Obtain an expression for the elastic strain energy in terms of the dimensions, stress intensity, and elastic constants of—

- (a) a uniform bar subjected to axial tensile stress;
- (b) a beam subjected to a uniform bending moment;
- (c) a circular rod subjected to simple torsion.

From the strain energy of a beam, find the central deflection of a beam simply supported at the ends and carrying a uniformly distributed load.

4. Deduce an expression for the deflection due to shear in a uniform rectangular beam, ends free, loaded uniformly.

A timber beam  $9'' \times 3''$  is loaded uniformly so that the maximum tensile stress due to bending on a span of 15 ft. is  $1,000 \text{ lbs./in.}^2$ . Taking  $E$  and  $G$  as  $1.5 \times 10^6$  and  $0.1 \times 10^6 \text{ lbs./in.}^2$  respectively, find the deflection at the centre.

## SECOND HALF

1. At a certain point in a bar the resultant stress on a plane is 5 tons per sq. inch tension and is inclined to the normal of the plane at an angle of  $30^\circ$ . The stress on a plane at right angles has a normal component of  $2\frac{1}{2}$  tons per sq. inch tension. Find the resultant intensity of stress on the second plane and the principal planes and stresses.

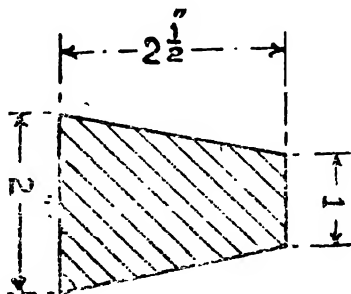
2. A carriage spring is built up of 10 plates  $\frac{1}{2}$  inch thick and 4 inches broad. The longest plate is 4 feet in length.

The spring carries a central load of  $2\frac{1}{2}$  tons.

Modulus of elasticity 13,000 tons per sq. inch.

Find the deflection under the load and the intensity of stress in the spring.

3. The section through the back of a forged crane hook is shown in the diagram.



The wide side is inwards. The line of action of the load is  $1\frac{1}{2}$  inches from the wide side of the section. The ultimate tensile and compressive strength of the material is 72,000 lbs. per sq. inch. Factor of safety 6. What is the safe load for the hook? (Neglect curvature of hook).

What is the value of applying a theory which takes into account the curvature of the hook?

4. Deduce expressions for the pressure and tensile stress at any point in the metal of a thick cylinder under internal pressure. A cast steel cylinder with closed ends and subject to an internal pressure of 5,000 lbs. per sq. inch has an internal diameter of 10 inches. The ultimate tensile strength of the material is 70,000 lbs. per sq. inch and the factor of safety is 5.

Determine the thickness of the cylinder.

5. (a) In what way is hollow shafting superior to solid shafting?

(b) Why is not casting a hollow ingot the equivalent of boring out a solid ingot?

(c) A solid shaft and a hollow shaft of the same material are to be of the same torsional strength. The solid shaft is to be 8 inches diameter and the hollow shaft  $8\frac{1}{2}$  inches diameter.

What must be the diameter of the hole in the hollow shaft?

How does the resistance to bending of the hollow shaft compare with that of the solid shaft?

## METALLURGY

### THEORETICAL PAPER

*The questions are of equal value*

*Only THREE questions are to be attempted in EACH half*

#### FIRST HALF

Examiners— $\left\{ \begin{array}{l} \text{MR. M. N. SEN, M.Sc. (CAL.), A.I.C., A.R.S.M.,} \\ \text{,, W. SAUNDERS, B.Sc.} \end{array} \right.$  (LOND.)

1. Explain why (1) the Izod impact value of a hot-rolled mild steel improves on normalising, (2) a cold-rolled wrought iron plate softens on annealing, (3) a hardened plain carbon steel becomes tougher on tempering.

2. What is a ternary and a quaternary steel? State the effect of (1) Nickel, (2) Nickel and Chromium, (3) Chromium, (4) Chromium and Vanadium, (5) Vanadium, on steel. What is the essential difference in composition between stainless iron and stainless steel? State their uses.

3. Describe the various methods that are in use for preventing or inhibiting corrosion of iron and steel articles, and discuss the theories as to the mechanism of initiation and progress of rusting of steel.

4. State, giving reasons, what materials you would specify for—

- (a) the roof of a basic open-hearth steel furnace;
- (b) the lining of a copper converter;
- (c) the lining of a hot chimney flue;
- (d) the wall of a coke-oven;
- (e) the checker brickwork of a regenerator;
- (f) the working bottom of an acid open-hearth steel furnace.

#### SECOND HALF

5. Give the approximate analysis of the steel used for the manufacture of corrugated iron.

Give a brief description of the conversion of this steel from the bar to the finished material.

Before acceptance the purchaser will examine samples of the consignment. What does he look for?

6. What classes of steel are used for the manufacture of the following products? (Give approximate analysis and characteristic properties of the steels) :—

- (a) 90 lbs. rail.
- (b) 12" Beam.
- (c) Tinned Sheets.
- (d) Ball Bearings.
- (e) A Kadali.
- (f) Pick Axe.
- (g) 12" Channel.
- (h) Loco Axle.
- (i) Boiler Plate.
- (j) Gear Wheel.
- (k) 1" Round.
- (l) A Bolt and Nut.
- (m) A 2" Screw.

7. Why has the Basic Process for the manufacture of Constructional Steels been adopted in this country? How is it combined with the Bessemer Process and what is the advantage of this? Give a very brief outline of this Duplex Method.

8. Draw out a flow sheet from the Blast Furnace, showing the grades of pig iron, their distribution and conversion to various products.

## THEORY OF STRUCTURES

### FIRST HALF

Examiners—{ Mr. T. A. GARLAND, B.Sc., A.M.I.E.  
                  ,, R. S. HARVEY.

*The questions are of equal value*

*Answer ANY FOUR questions from this half*

1. Prove the graphical method of drawing a bending moment diagram for a system of two concentrated loads. Neglecting the weight of the beam itself, draw the diagrams of shearing forces and bending moments for the simply supported beam shown in Fig 1.

Linear scale	...	...	4 ft to 1 inch.
Load scale	...	...	5 tons to 1 inch.
Shearing force scale	...	...	5 tons to 1 inch
Bending moment scale	...	...	25 tons ft. to 1 inch.

2. Show that the Rankine-Gordon formula is equivalent to Euler's formula for long struts, provided that the constant is properly chosen. Find the value of this constant for struts of mild steel.

3. (a) Assuming that  $M/I = E/R$  for straight beams of uniform cross-section, prove that the bending moment at any section is equal to  $EI d^2y/dx^2$ .

(b) Neglecting the weight of the beam itself, deduce an expression for the deflection at the free end of a cantilever of length  $L$  carrying a load which increases uniformly from zero at the free end to  $W$  tons per foot at the fixed end.

4. An 'I' section  $12" \times 5"$  with flanges  $0.55"$  thick and web  $0.35"$  thick is subject to a total vertical shearing force of 14 tons. Assuming that the corners are square, find the maximum shearing stress at the section and the ratio of the maximum to the mean shearing stress.

5. A Warren girder like that shown in Fig. 2 had a load of 6 tons at each of the lower panel points. Find graphically the forces in all the members, tabulate your results, stating whether the forces are tensile or compressive. Only one-half of the force diagram need be drawn. Load scale 5 tons to 1 inch. Test your results by finding the forces in the members  $DE$  and  $ER$  by the method of sections.

6. A continuous beam 30 ft. long is freely supported at three points at the same level and loaded as shown in Fig. 3. Neglecting the weight of the beam, and using the method of three moments, find the bending moments and reactions at the supports, and sketch the bending moment diagram, stating the scales used.

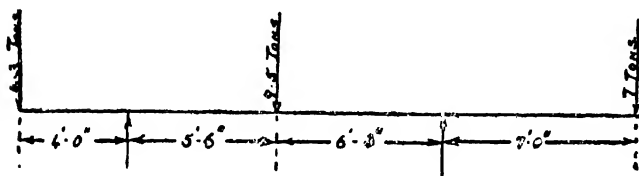


Fig. 1.

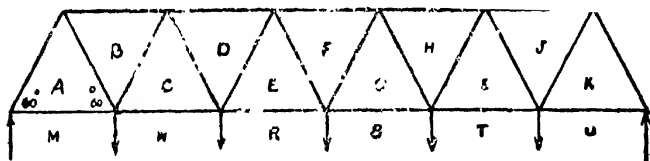


Fig. 2.

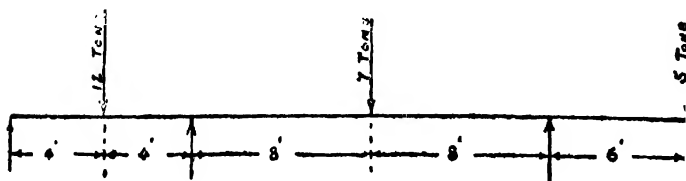


Fig. 3



## SECOND HALF

*The questions are of equal value*

*Answer THREE questions*

1. Construct a formula, giving the ratio of depth of neutral axis to depth of beam for a rectangular concrete beam with tensile reinforcement only.

A freely supported roof slab has a span of 10 feet and a total depth of 4½ inches. The reinforcement consists of three-eighth inch diameter bars spaced 4" apart and placed one inch above the bottom of the slab. Find the stresses induced in the concrete and the steel by the weight of the slab alone. What load per square foot can be put on the roof without the stresses of 600 lbs. per sq. inch for concrete and 16,000 lbs. per sq. inch for steel being exceeded?

2. A square reinforced concrete column 10 feet high has to support a concentric load of 25 tons. Give sketches, shewing the cross-section designed by you and also the arrangement of the lateral reinforcement. Stress in concrete to be 500 lbs. per sq. inch.

Say in what three ways a similar column with the same external dimensions could be made to take a load of 35 tons.

3. A column 12 feet high consists of an 8" by 4" B.S.B. with a bracket fixed at the top. See Fig. 1. The concentric load on the column is 1 ton.

Assuming that the top of the column is free in the plane of the bracket and hinged in a plane at right angles to this, find the safe load which the bracket can carry at a distance of two feet from the centre of the shaft.

Take the compressive stress in a short specimen of mild steel as 6½ tons per sq. inch and Rankine's constant as  $\frac{1}{7500}$ .

The properties of an 8" by 4" B.S.B. are :—

Weight	...	...	18 lbs. per lineal foot.
Sectional area			5.2 sq. inches.
Moment of inertia about XX			55.6 inch units.
Moment of inertia about YY			3.5 inch units.
Radius of gyration about XX			3.24 inches.
Radius of gyration about YY			.81 inches.

4. What are the assumptions made in Rankine's theory for earth pressure?

A certain part of a structure weighing 250 tons rests on a solid concrete foundation 12 feet square. If the soil weighs 1 cwt. per cubic foot and has an angle of repose of 26 degrees, find the minimum safe depth of the foundation. The weight of the concrete may be taken as 1½ cwts. per cubic foot.

5. Prove the middle third rule used in masonry structures.

Fig. II represents the top of a bridge pier. The reactions due to each span are :—

Dead load	...	...	50 tons.
Live load	...	...	200 tons.

The bearings are 3 feet apart and are symmetrically placed on the cap which is 12 feet long and of monolithic construction. Find the minimum width *B* of the cap so that there will be no tension in the joint between the cap and the pier.

If the stress in this joint is to be never less than .5 ton per sq. foot compression, how much wider will the pier have to be? The weight of the cap may be neglected.

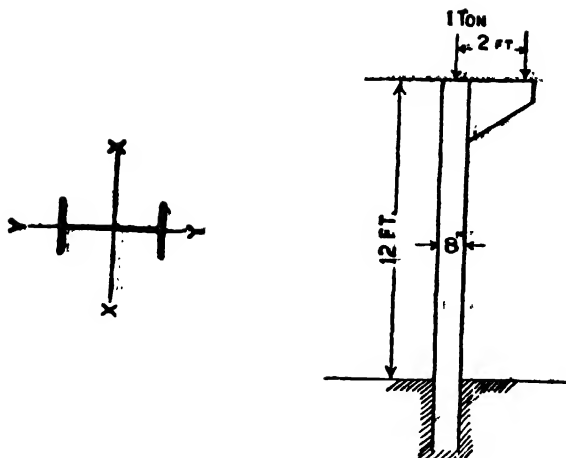


FIG. I.

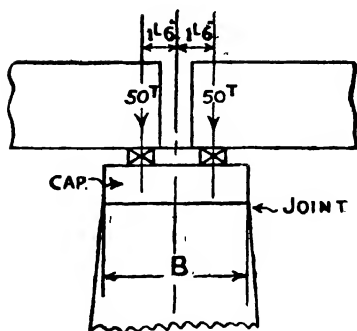


FIG. II.

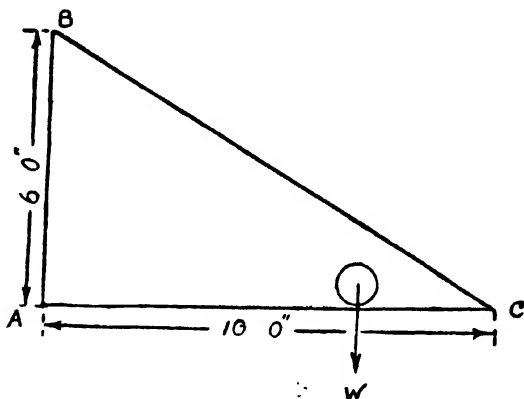
## STRUCTURAL DESIGN

*The questions are of equal value**Candidates may use Dorman Long's Section Handbook*

Examiners—{MR. T. A. GARLAND, B.Sc., A.M. I.E.E.  
MR. R. S. HARVEY.

## FIRST HALF

A 4 ton foundry crane having the dimensions given in Fig. 1 consists of a horizontal member  $AC$ , a vertical member  $AB$ , and a sloping member  $BC$ . A jockey pulley, which is free to move along the member  $AC$ , carries the load (4 tons). The vertical member  $AB$  is to be connected with hinges to one of the main  $12'' \times 5''$  R.S.J. stanchions of the building in such a way that the crane can rotate through an angle of  $180^\circ$  in plan.

Fig 1

Prepare a suitable design for this crane and make a dimensioned drawing to a scale of  $1\frac{1}{2}$  ins. to 1 foot, showing how the various parts are connected together and how the hinges at  $A$  and  $B$  are attached to the stanchion. The details of the jockey pulley need not be shown.

Or,

A plate girder of 30 ft. effective span carries a rolling load of 4 wheels at 8 ft. centres with a load of 12 tons (including dynamic effect) on each wheel.

Overall depth of girder	... 2 ft.
Maximum flange stress	... $7\frac{1}{2}$ tons per square inch.
Maximum shear stress in web	... $5\frac{1}{2}$ " " "
Diameter of rivets	... $\frac{3}{4}$ " " "

Design suitable sections at the centre and at the supports and make a drawing to a scale of  $1\frac{1}{2}$  inches to 1 foot of a portion of the girder at these two sections, showing the pitch of the rivets connecting the flange angles to the web and to the flanges. Assume any other data required.

## SECOND HALF

Answer EITHER A OR B

*Both questions have equal value*

A. Design a ferro-concrete lintel to suit the following :—

Clear span	...	10' 0"
Thickness of wall	...	20"
Load per foot run	...	10 cwt.
Max. stress in concrete	...	500 lbs. per sq. in.
Max. stress in steel	...	15,000 lbs. per sq. in.

Shew the reinforcement arrangement in detail and specify the concrete to be used.

B. From the following data, design a brick retaining wall to support an earth fill without surcharge :—

Height of fill above ground level	12 feet.
Face batter of wall	1 in 12.
Width of wall at top	2 feet.
Weight of brick work	1 cwt. per c. ft.
Weight of concrete	1½ cwt. per c. ft.
Weight of earth	1 cwt. per c. ft.
Angle of repose of earth	30 deg.

Shew what drainage you consider necessary.

Assuming that the wall is to be built in Bengal, give a brief specification for the cement concrete to be used in the foundation.

## WORKS MANAGEMENT AND ACCOUNTS

*The questions are of equal value*

*Attempt THREE questions only from EACH half*

*Examiners—* { MR. J. RIFFKIN.  
MR. R. WOLFENDEN, M.B.E., M.SC., M.I.MECH.  
E., M.I.E. (IND.), BARRISTER-AT-LAW.  
MR. M. K. GHOSH, M.A. (CAL.), B.COM. (LOND.)

FIRST HALF

1. Explain and illustrate what is meant by 'Functional Foremanship.'

Compare and contrast the work of (a) the foremen, (b) the operators, under 'Functional Foremanship' and the common (or 'Military') system.

2. When is the replacement of a machine justified?

2. When is the replacement of a machine made, a machine costs originally Rs. 12,000, its life is estimated at 15 years and its residual or scrap value at the end of that period is estimated at Rs. 2,000. Assuming that depreciation is provided for by annually setting aside a constant percentage of the depreciated machine's value, obtain this constant percentage and the amount in the depreciation fund at the end of 10 years.

## 3. Describe the following systems of payment :—

- (a) Halsey Premium Bonus System.  
(b) Rowan System.

If ten hours were given as the time allowed for a given piece of work under the Rowan, and also the Weir (Halsey 50/50) systems, and the price equivalent to 10 hours were given under the Piecework system, show graphically how the Factory Cost, the Worker's Rate per hour, and the Premium earned would vary for the following times taken, viz. 10, 8, 6 and 4 hours. The Day Rate is Annas 8 per hour and the Oncost Rate is Annas 12 per hour.

## 4. What are the main factors which attract an industry to—

- (a) a large city;  
(b) a suburb;  
(c) the mofussil?

Allocate one industry to one of each of these sections, and give your reasons for your choice.

## SECOND HALF

1. Describe how you would (1) check the time worked by the men, and (2) deal (for Costing Purposes) with the Wages paid in a manufacturing business, where all labour is paid on a time basis.

2. Machinery is purchased for a sum of Rs. 30,000. Additions are made in June of the second year to the amount of Rs. 2,500 and in March of the third year to the extent of Rs. 3,200. Show, by means of ledger accounts, the method of dealing with these additions when writing off the annual depreciation, the rate of which is 10% on the balance of the Plant and Machinery Account.

3. Rule a form of petty Cash Book containing analysis columns, and enter therein the following transactions, bringing down the balance on hand at the conclusion :—

1932.		Rs. A. P.		
March	1. Received cheque from the chief cashier for starting balance, cashed same	...	20	0 0
"	1. Paid for Postages	...	1	0 0
"	1. Telegram to Delhi	...	1	0 0
"	2. Electric Light Bill to December 31 last	...	4	0 0
"	2. Telegram to Bombay	...	2	0 0
"	3. Fare to Burdwan	...	1	0 0
"	3. Paid for Postages	...	1	8 0
"	4. Carriage of samples to Sen & Co.	...	1	8 0
"	4. Telegram to Allahabad	...	2	0 0
"	5. Paid for Postages	...	1	0 0
"	5. Telegram to Burdwan	...	1	0 0
"	6. Paid for Postage	...	1	0 0

4. How, as an auditor, would you value and verify the item 'Work in Progress' appearing in a Balance Sheet?

(C. E. and M. E.)

## TECHNICAL CHEMISTRY AND METALLURGY

## THEORETICAL PAPER

*The questions are of equal value**Not more than THREE questions are to be attempted in EACH half*

Examiners—{ PROF. N. N. SEN, M.Sc., A.I.C., A.R.S.M.  
 { DR. P. B. SARKAR, D.Sc.

## FIRST HALF

1. Classify furnaces used for metallurgical purposes. Compare the Siemen's regenerative furnace with an ordinary reverberatory furnace, giving the principal points of resemblance and difference in construction and working.

2. Describe the production of steel by the Basic Bessemer process, giving the chemistry and the thermal effect of the reactions involved.

3. State, giving reasons, the impurities that you think harmful in water to be used for raising steam. How would you remove them?

A certain tube well water contains :—

Calcium carbonate	...	11.2	grains	per	gallon.
Magnesium carbonate	...	2.1	"	"	"
Calcium chloride	...	1.5	"	"	"
Magnesium chloride	...	2.3	"	"	"
Calcium sulphate	...	18.7	"	"	"
Sodium sulphate	...	2.8	"	"	"
Sodium chloride	...	6.3	"	"	"

Calculate the amount of slaked lime and soda ash you would require to soften 1,000 gallons of the above water.

4. Define the following terms with illustrations : eutectic, eutectoid, solid solution, normalising, case-hardening, sherardising.

## SECOND HALF

5. Write notes on :—

(1) Poor lime, (2) Fat lime, (3) Hydraulic lime, (4) Cements—natural and artificial.

*Or,*

Classify the solid fuels. Describe, in detail, the working of a modern coke-oven with its recovery plant.

6. Write an essay on clay, dealing with the following points : the nature and origin of clay, its physical and chemical properties, its rational analysis, its chemical composition, and its use in the manufacture of fire-bricks and paving-bricks.

7. State the influence of (1) nickel, (2) silicon, (3) molybdenum, (4) vanadium, and (5) tungsten, on steel.

Give the composition and uses of the more important special steels, namely, nickel steel, silicon steel, and tungsten steel.

8. Draw an equilibrium diagram of a binary alloy-system, and explain the freezing of a few typical alloys of this system with reference to the diagram.

## B.E. EXAMINATION

(C. E.)

## PRACTICAL PAPER

*Examiners*—{ Mr. N. N. SEN, M.Sc., A.I.C., A.R.S.M.  
Dr. P. B. SARKAR, D.Sc.

1. Estimate temporary hardness of the water in bottle A.
  2. Estimate gravimetrically the total quantity of iron present in solution B.
  3. Submit your practical note-book.
- 

(M. E.)

## TECHNICAL CHEMISTRY

## PRACTICAL PAPER

1. Estimate the total quantity of lime present in solution A.
  2. Estimate gravimetrically the total amount of copper contained in bottle B.
  3. Submit your practical note-book.
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